

KINGSLEY

THE TISCH LIBRARY
AT TUFTS UNIVERSITY



CHARLES KINGSLEY.

WATER BABIES AND THE HEROES

By CHARLES KINGSLEY



R. F. FENNO & COMPANY: PUB-
LISHERS : 9 & 11 E. SIXTEENTH
STREET : NEW YORK CITY : 1900

THE WATER-BABIES:

A FAIRY TALE FOR A LAND-BABY.

CHAPTER I.

“I HEARD a thousand blended notes,
While in a grove I sate reclined ;
In that sweet mood when pleasant thoughts
Bring sad thoughts to the mind.

“To her fair works did Nature link
The human soul that through me ran ;
And much it grieved my heart to think,
What man has made of man.”

WORDSWORTH.

ONCE upon a time there was a little chimney-sweep, and his name was Tom. That is a short name, and you have heard it before, so you will not have much trouble in remembering it. He lived in a great town in the North country, where there were plenty of chimneys to sweep, and plenty of money for Tom to earn and his master to spend. He could not read nor write, and did not care to do either ; and he never washed himself, for there was no water up the court where he lived. He had never been taught to say his prayers. He never had heard of God or of Christ, except in words which you never have heard, and which it would have been well if he had never heard. He cried half his time, and laughed the other half. He

cried when he had to climb the dark flues, rubbing his poor knees and elbows raw ; and when the soot got into his eyes, which it did every day in the week ; and when his master beat him, which he did every day in the week ; and when he had not enough to eat, which happened every day in the week likewise. And he laughed the other half of the day, when he was tossing half-pennies with the other boys, or playing leap-frog over the posts, or bowling stones at the horses' legs as they trotted by ; which last was excellent fun, when there was a wall at hand behind which to hide. As for chimney-sweeping, and being hungry, and being beaten, he took all that for the way of the world, like the rain and snow and thunder, and stood manfully with his back to it till it was over, as his old donkey did to a hailstorm ; and then shook his ears and was as jolly as ever ; and thought of the fine times coming, when he would be a man, and a master-sweep, and sit in the public-house with a quart of beer and a long pipe, and play cards for silver money, and wear velvet-eens and ankle-jacks, and keep a white bull-dog with one gray ear, and carry her puppies in his pocket, just like a man. And he would have apprentices, one, two, three, if he could. How he would bully them, and knock them about, just as his master did to him ; and make them carry home the soot-sacks, while he rode before them on his donkey, with a pipe in his mouth and a flower in his button-hole, like a king at the head of his army. Yes, there were good times coming ; and, when his master let him have a pull at the leavings of his beer, Tom was the jolliest boy in the whole town.

One day a smart little groom rode into the court where Tom lived. Tom was just hiding behind a wall, to heave half a brick at his horse's legs, as is the custom of that country when they welcome strangers ; but the groom saw him, and halloed to him to know where Mr. Grimes,

the chimney-sweep, lived. Now, Mr. Grimes was Tom's own master, and Tom was a good man of business, and always civil to customers ; so he put the half-brick down quietly behind the wall, and proceeded to take orders.

Mr. Grimes was to come up next morning to Sir John Harthover's, at the Place, for his old chimney-sweep was gone to prison, and the chimneys wanted sweeping. And so he rode away, not giving Tom time to ask what the sweep had gone to prison for, which was a matter of interest to Tom, as he had been in prison once or twice himself. Moreover, the groom looked so very neat and clean, with his drab gaiters, drab breeches, drab jacket, snow-white tie with a smart pin in it, and clean round ruddy face, that Tom was offended and disgusted at his appearance, and considered him a stuck-up fellow, who gave himself airs because he wore smart clothes, and other people paid for them ; and went behind the wall to fetch the half-brick after all : but did not, remembering that he had come in the way of business, and was, as it were, under a flag of truce.

His master was so delighted at his new customer that he knocked Tom down out of hand, and drank more beer that night than he usually did in two, in order to be sure of getting up in time next morning ; for the more a man's head aches when he wakes, the more glad he is to turn out, and have a breath of fresh air. And, when he did get up at four the next morning, he knocked Tom down again, in order to teach him (as young gentlemen used to be taught at public schools) that he must be an extra good boy that day, as they were going to a very great house, and might make a very good thing of it, if they could but give satisfaction.

And Tom thought so likewise, and, indeed, would have done and behaved his best, even without being knocked down. For, of all places upon earth, Harthover Place

(which he had never seen) was the most wonderful ; and of all men on earth, Sir John (whom he had seen, having been sent to jail by him twice) was the most awful.

Harthover Place was really a grand place, even for the rich North country ; with a house so large that in the frame-breaking riots, which Tom could just remember, the Duke of Wellington, with ten thousand soldiers and cannon to match, were easily housed therein ; at least, so Tom believed ; with a park full of deer, which Tom believed to be monsters who were in the habit of eating children ; with miles of game-preserves, in which Mr. Grimes and the collier-lads poached at times, on which occasions Tom saw pheasants, and wondered what they tasted like ; with a noble salmon-river, in which Mr. Grimes and his friends would have liked to poach ; but then they must have got into cold water, and that they did not like at all. In short, Harthover was a grand place, and Sir John a grand old man, whom even Mr. Grimes respected, for not only could he send Mr. Grimes to prison when he deserved it, as he did once or twice a week ; not only did he own all the land about for miles ; not only was he a jolly, honest, sensible squire as ever kept a pack of hounds, who would do what he thought right by his neighbors, as well as get what he thought right for himself ; but, what was more, he weighed full fifteen stone, was nobody knew how many inches round the chest, and could have thrashed Mr. Grimes himself in fair fight, which very few folk round there could do, and which, my dear little boy, would not have been right for him to do, as a great many things are not which one both can do, and would like very much to do. So Mr. Grimes touched his hat to him when he rode through the town, and called him a " buirdly awd chap," and his young ladies " gradely lasses," which are two high compliments in the North country ; and thought that that made up for his poaching

Sir John's pheasants ; whereby you may perceive that Mr. Grimes had not been to a properly inspected Government National School.

Now, I dare say, you never got up at three o'clock on a midsummer morning. Some people get up then because they want to catch salmon ; and some, because they want to climb Alps ; and a great many more, because they must, like Tom. But, I assure you, that three o'clock on a midsummer morning is the pleasantest time of all the twenty-four hours, and all the three hundred and sixty-five days ; and why every one does not get up then, I never could tell, save that they are all determined to spoil their nerves and their complexions by doing all night what they might just as well do all day. But Tom, instead of going out to dinner at half-past eight at night, and to a ball at ten, and finishing off somewhere between twelve and four, went to bed at seven, when his master went to the public-house, and slept like a dead pig ; for which reason he was as piert as a game-cock (who always gets up early to wake the maids), and just ready to get up when the fine gentlemen and ladies were just ready to go to bed.

So he and his master set out ; Grimes rode the donkey in front, and Tom and the brushes walked behind ; out of the court, and up the street, past the closed window-shutters, and the winking weary policemen, and the roofs all shining gray in the gray dawn.

They passed through the pitmen's village, all shut up and silent now ; and through the turnpike ; and then they were out in the real country, and plodding along the black dusty road, between black slag walls, with no sound but the groaning and thumping of the pit-engine in the next field. But soon the road grew white, and the walls likewise ; and at the wall's foot grew long grass and gay flowers, all drenched with dew ; and instead of the groaning of the pit-engine, they heard the skylark saying his

matins high up in the air, and the pit-bird warbling in the sedges, as he had warbled all night long.

All else was silent. For old Mrs. Earth was still fast asleep ; and, like many pretty people, she looked still prettier asleep than awake. The great elm-trees in the gold-green meadows were fast asleep above, and the cows fast asleep beneath them ; nay, the few clouds which were about were fast asleep likewise, and so tired that they had lain down on the earth to rest, in long white flakes and bars, among the stems of the elm-trees, and along the tops of the alders by the stream, waiting for the sun to bid them rise and go about their day's business in the clear blue overhead.

On they went ; and Tom looked and looked, for he never had been so far into the country before ; and longed to get over a gate, and pick buttercups, and look for birds' nests in the hedge ; but Mr. Grimes was a man of business, and would not have heard of that.

Soon they came up with a poor Irishwoman, trudging along with a bundle at her back. She had a gray shawl over her head, and crimson madder petticoat ; so you may be sure she came from Galway. She had neither shoes nor stockings, and limped along as if she were tired and footsore : but she was a very tall handsome woman, with bright gray eyes, and heavy black hair hanging about her cheeks. And she took Mr. Grimes's fancy so much, that when he came alongside he called out to her :

"This is a hard road for a gradely foot like that. Will ye up, lass, and ride behind me?"

But, perhaps she did not admire Mr. Grimes's look and voice ; for she answered quietly :

"No, thank you ; I'd sooner walk with your little lad here."

"You may please yourself," growled Grimes, and went on, smoking.

So she walked beside Tom, and talked to him, and asked him where he lived, and what he knew, and all about himself, till Tom thought he had never met such a pleasant-spoken woman. And she asked him, at last, whether he said his prayers ; and seemed sad when he told her that he knew no prayers to say.

Then he asked her where she lived ; and she said far away by the sea. And Tom asked her about the sea ; and she told him how it rolled and roared over the rocks in winter nights, and lay still in the bright summer days, for the children to bathe and play in it ; and many a story more, till Tom longed to go and see the sea, and bathe in it likewise.

At last, at the bottom of a hill, they came to a spring : not such a spring as you see here, which soaks up out of a white gravel in the bog, among red fly-catchers, and pink bottle-heath, and sweet white orchis ; nor such a one as you may see, too, here, which bubbles up under the warm sand-bank in the hollow lane, by the great tuft of lady-ferns, and makes the sand dance reels at the bottom, day and night, all the year round ; not such a spring as either of those : but a real North country limestone fountain, like one of those in Sicily or Greece, where the old heathen fancied the nymphs sat cooling themselves the hot summer's day, while the shepherds peeped at them from behind the bushes. Out of a low cave of rock, at the foot of a limestone crag, the great fountain rose, quelling and bubbling and gurgling, so clear that you could not tell where the water ended and the air began ; and ran away under the road, a stream large enough to turn a mill ; among blue geranium, and golden globe-flower, and wild raspberry, and the bird-cherry with its tassels of snow.

And there Grimes stopped, and looked ; and Tom looked too. Tom was wondering whether anything lived in that dark cave, and came out at night to fly in the meadows.

But Grimes was not wondering at all. Without a word, he got off his donkey, and clambered over the low road-wall, and knelt down, and began dipping his ugly head into the spring ; and very dirty he made it.

Tom was picking the flowers as fast as he could. The Irishwoman helped him, and showed him how to tie them up ; and a very pretty nosegay they had made between them. But when he saw Grimes actually wash, he stopped, quite astonished ; and when Grimes had finished, and began shaking his ears to dry them, he said :

“Why, master, I never saw you do that before.”

“Nor will again, most likely. ’Twasn’t for cleanliness I did it, but for coolness. I’d be ashamed to want washing every week or so, like any smutty collier-lad.”

“I wish I might go and dip my head in,” said poor little Tom. “It must be as good as putting it under the town-pump ; and there is no beadle here to drive a chap away.”

“Thou come along,” said Grimes. “What dost want with washing thyself? Thou did not drink half a gallon of beer last night, like me.”

“I don’t care for you,” said naughty Tom, and ran down to the stream, and began washing his face.

Grimes was very sulky, because the woman preferred Tom’s company to his ; so he dashed at him with horrid words, and tore him up from his knees, and began beating him. But Tom was accustomed to that, and got his head safe between Mr. Grimes’s legs, and kicked his shins with all his might.

“Are you not ashamed of yourself, Thomas Grimes?” cried the Irishwoman over the wall.

Grimes looked up, startled at her knowing his name ; but all he answered was, “No : nor never was yet ;” and went on beating Tom.

“True for you. If you ever had been ashamed of

yourself, you would have gone over into Vendale long ago."

"What do you know about Vendale?" shouted Grimes; but he left off beating Tom.

"I know about Vendale, and about you, too. I know, for instance, what happened in Aldermire Copse, by night, two years ago come Martinmas."

"You do?" shouted Grimes; and leaving Tom, climbed up over the wall, and faced the woman. Tom thought he was going to strike her; but she looked him too full and fierce in the face for that.

"Yes; I was there," said the Irishwoman, quietly.

"You are no Irishwoman, by your speech," said Grimes, after many bad words.

"Never mind who I am. I saw what I saw; and if you strike that boy again, I can tell what I know."

Grimes seemed quite cowed, and got on his donkey without another word.

"Stop!" said the Irishwoman. "I have one more word for you both: for you will both see me again, before all is over. Those that wish to be clean, clean they will be; and those that wish to be foul, foul they will be. Remember."

And she turned away, and through a gate into the meadow. Grimes stood still a moment, like a man who had been stunned. Then he rushed after her, shouting, "You come back!" But when he got into the meadow, the woman was not there.

Had she hidden away? There was no place to hide in. But Grimes looked about, and Tom also, for he was as puzzled as Grimes himself, at her disappearing so suddenly; but look where they would, she was not there.

Grimes came back again, as silent as a post, for he was a little frightened; and getting on his donkey, filled a fresh pipe, and smoked away, leaving Tom in peace.

And now they had gone three miles and more, and came to Sir John's lodge-gates.

Very grand lodges they were, with very grand iron gates, and stone gate-posts, and on the top of each a most dreadful bogy, all teeth, horns, and tail, which was the crest which Sir John's ancestors wore in the War of the Roses; and very prudent men they were to wear it, for all their enemies must have run for their lives at the very first sight of them.

Grimes rang at the gate, and out came a keeper on the spot, and opened.

"I was told to expect thee," he said. "Now, thou'lt be so good as to keep to the main avenue, and not let me find a hare or rabbit on thee when thou comest back. I shall look sharp for one, I tell thee."

"Not if it's in the bottom of the soot-bag," quoth Grimes, and at that he laughed; and the keeper laughed, and said,—

"If that's thy sort, I may as well walk up with thee to the hall."

"I think thou best had. It's thy business to see after thy game, man, and not mine."

So the keeper went with them; and, to Tom's surprise, he and Grimes chatted together all the way quite pleasantly. He did not know that a keeper is only a poacher turned outside in, and a poacher a keeper turned inside out.

They walked up a great lime-avenue, a full mile long, and between their stems Tom peeped trembling at the horns of the sleeping deer, which stood up among the ferns. Tom had never seen such enormous trees, and as he looked up he fancied that the blue sky rested on their heads. But he was puzzled very much by a strange murmuring noise, which followed them all the way; so much puzzled, that at last he took courage to ask the keeper what it was,

He spoke very civilly, and called him Sir, for he was horribly afraid of him, which pleased the keeper, and he told him that they were the bees about the lime-flowers.

“What are bees?” asked Tom.

“What make honey.”

“What is honey?” asked Tom.

“Thou hold thy noise,” said Grimes.

“Let the boy be,” said the keeper. “He’s a civil young chap now, and that’s more than he’ll be long, if he bides with thee.”

Grimes laughed, for he took that for a compliment.

“I wish I were a keeper,” said Tom, “to live in such a beautiful place, and wear green velveteens, and have a real dog-whistle at my button, like you.”

The keeper laughed; he was a kind-hearted fellow enough.

“Let well alone, lad, and ill too, at times. Thy life’s safer than mine, at all events;—eh, Mr. Grimes?”

And Grimes laughed again; and then the two men began talking quite low. Tom could hear, though, that it was about some poaching fight; and at last Grimes said, surlily,—

“Hast thou anything against me?”

“Not now.”

“Then don’t ask me any questions till thou hast, for I am a man of honor.”

And at that they both laughed again, and thought it a very good joke.

And by this time they were come up to the great iron gates in front of the house; and Tom stared through them at the rhododendrons and azaleas, which were all in flower; and then at the house itself, and wondered how many chimneys there were in it, and how long ago it was built, and what was the man’s name that built it, and whether he got much money for his job?

These last were very difficult questions to answer. For Harthover had been built at ninety different times, and in nineteen different styles, and looked as if somebody had built a whole street of houses of every imaginable shape, and then stirred them together with a spoon.

For the attics were Anglo-Saxon.

The third floor, Norman.

The second, Cinque-cento.

The first floor, Elizabethan.

The right wing, Pure Doric.

The centre, Early English, with a huge portico copied from the Parthenon.

The left wing, Pure Bœotian, which the country folk admired most of all, because it was just like the new barracks in the town, only three times as big.

The grand staircase was copied from the Catacombs at Rome.

The back staircase, from the Tajmahal at Agra. This was built by Sir John's great-great-great-uncle, who won, in Lord Clive's Indian wars, plenty of money, plenty of wounds, and no more taste than his betters.

The cellars were copied from the caves of Elephanta.

The offices, from the Pavilion at Brighton.

And the rest from nothing in heaven, or earth, or under the earth.

So that Harthover House was a great puzzle to antiquarians, and a thorough Naboth's vineyard to critics, and architects, and all persons who like meddling with other men's business, and spending other men's money. So they all were setting upon poor Sir John, year after year, and trying to talk him into spending a hundred thousand pounds or so in the building, to please them and not himself. But he always put them off, like a canny North-countryman as he was. One wanted him to build a Gothic house, but he said he was no Goth; and another

to build an Elizabethan, but he said he lived under good Queen Victoria, and not good Queen Bess ; and another was bold enough to tell him that his house was ugly, but he said he lived inside it, and not outside ; and another, that there was no unity in it, but he said that that was just why he liked the old place. For he liked to see how each Sir John, and Sir Hugh, and Sir Ralph, and Sir Randal, had left his mark upon the place, each after his own taste ; and he had no more notion of disturbing his ancestors' work than of disturbing their graves. For now the house looked like a real live house, that had a history, and had grown and grown as the world grew ; and that it was only an upstart fellow who did not know who his own grandfather was, who would change it for some spick and span new Gothic or Elizabethan thing, which looked as if it had been all spawned in a night, as mushroom-rooms are. From which you may collect (if you have wit enough), that Sir John was a very sound-headed, sound-hearted squire, and just the man to keep the country side in order, and show good sport with his hounds.

But Tom and his master did not go in through the great iron gates, as if they had been Dukes or Bishops, but round the back way ; and a very long way round it was ; and into a little back-door, where the ash-boy let them in, yawning horribly ; and then in a passage the housekeeper met them, in such a flowered chintz dressing-gown, that Tom mistook her for My Lady herself, and she gave Grimes solemn orders about " You will take care of this, and take care of that," as if he was going up the chimneys, and not Tom. And Grimes listened, and said every now and then, under his voice, " You'll mind that, you little beggar ? " and Tom did mind, all at least that he could. And then the housekeeper turned them into a grand room, all covered up in sheets of brown paper, and bade

them begin, in a lofty and tremendous voice ; and so, after a whimper or two, and a kick from his master, into the grate Tom went, and up the chimney, while a housemaid stayed in the room to watch the furniture ; to whom Mr. Grimes paid many playful and chivalrous compliments, but met with very slight encouragement in return,

How many chimneys he swept I cannot say : but he swept so many that he got quite tired, and puzzled too, for they were not like the town-flues to which he was accustomed, but such as you would find—if you would only get up them and look, which perhaps you would not like to do—in old country houses, large and crooked chimneys, which had been altered again and again, till they ran one into another, anastomosing (as Professor Owen would say) considerably. So Tom fairly lost his way in them ; not that he cared much for that, though he was in pitchy darkness, for he was as much at home in a chimney as a mole is under ground ; but at last, coming down as he thought the right chimney, he came down the wrong one, and found himself standing on the hearth-rug in a room the like of which he had never seen before.

Tom had never seen the like. He had never been in gentlefolks' rooms but when the carpets were all up, and the curtains down, and the furniture huddled together under a cloth, and the pictures covered with aprons and dusters ; and he had often enough wondered what the rooms were like when they were all ready for the quality to sit in. And now he saw, and he thought the sight very pretty.

The room was all dressed in white : white window-curtains, white bed-curtains, white furniture, and white walls, with just a few lines of pink here and there. The carpet was all over gay little flowers ; and the walls were hung with pictures in gilt frames, which amused Tom very much. There were pictures of ladies and gentlemen, and pictures of horses and dogs. The horses he liked ;

but the dogs he did not care for much, for there were no bull-dogs among them, not even a terrier. But the two pictures which took his fancy most were : one, a man in long garments, with little children and their mothers round him, who was laying his hand upon the children's heads. That was a very pretty picture, Tom thought, to hang in a lady's room. For he could see that it was a lady's room by the dresses which lay about.

The other picture was that of a man nailed to a cross, which surprised Tom much. He fancied that he had seen something like it in a shop-window. But why was it there? "Poor man," thought Tom; "and he looks so kind and quiet. But why should the lady have such a sad picture as that in her room? Perhaps it was some kinsman of hers, who had been murdered by the savages in foreign parts, and she kept it there for a remembrance." And Tom felt sad, and awed, and turned to look at something else.

The next thing he saw, and that too puzzled him, was a washing-stand, with ewers and basins, and soap and brushes, and towels; and a large bath, full of clean water;—what a heap of things, all for washing! "She must be a very dirty lady," thought Tom, "by my master's rule, to want as much scrubbing as all that. But she must be very cunning to put the dirt out of the way so well afterwards, for I don't see a speck about the room, not even on the very towels."

And then, looking toward the bed, he saw that dirty lady, and held his breath with astonishment.

Under the snow-white coverlet, upon the snow-white pillow, lay the most beautiful little girl that Tom had ever seen. Her cheeks were almost as white as the pillow, and her hair was like threads of gold spread all about over the bed. She might have been as old as Tom, or maybe a year or two older; but Tom did not think of

that. He thought only of her delicate skin and golden hair, and wondered whether she were a real live person, or one of the wax dolls he had seen in the shops. But when he saw her breathe, he made up his mind that she was alive, and stood staring at her, as if she had been an angel out of heaven.

No. She cannot be dirty. She never could have been dirty, thought Tom to himself. And then he thought, "And are all people like that when they are washed?" And he looked at his own wrist, and tried to rub the soot off, and wondered whether it ever would come off. "Certainly I should look much prettier then, if I grew at all like her."

And looking round, he suddenly saw, standing close to him, a little, ugly, black, ragged figure, with bleared eyes and grinning white teeth. He turned on it angrily. What did such a little black ape want in that sweet young lady's room? And behold, it was himself, reflected in a great mirror, the like of which Tom had never seen before.

And Tom, for the first time in his life, found out that he was dirty; and burst into tears with shame and anger; and turned to sneak up the chimney again and hide, and upset the fender, and threw the fire-irons down, with a noise as of ten thousand tin kettles tied to ten thousand mad dogs' tails.

Up jumped the little white lady in her bed, and, seeing Tom, screamed as shrill as any peacock. In rushed a stout old nurse from the next room, and seeing Tom likewise, made up her mind that he had come to rob, plunder, destroy, and burn; and dashed at him, as he lay over the fender, so fast that she caught him by the jacket.

But she did not hold him. Tom had been in a policeman's hands many a time, and out of them too, what is more: and he would have been ashamed to face his friends forever if he had been stupid enough to be caught by an

old woman : so he doubled under the good lady's arm, across the room, and out of the window in a moment.

He did not need to drop out, though he would have done so bravely enough. Nor even to let himself down a spout, which would have been an old game to him ; for once he got up by a spout to the church-roof, he said to take jackdaw's eggs, but the policemen said to steal lead ; and when he was seen on high, sat there till the sun got too hot, and came down by another spout, leaving the policemen to go back to the station-house and eat their dinners.

But all under the window spread a tree, with great leaves, and sweet white flowers, almost as big as his head. It was a magnolia, I suppose ; but Tom knew nothing about that, and cared less ; for down the tree he went, like a cat, and across the garden-lawn, and over the iron railings, and up the park towards the wood, leaving the old nurse to scream murder and fire at the window.

The under-gardener, mowing, saw Tom, and threw down his scythe, caught his leg in it, and cut his shin open, whereby he kept his bed for a week ; but in his hurry he never knew it, and gave chase to poor Tom. The dairy-maid heard the noise, got the churn between her knees, and tumbled over it, spilling all the cream ; and yet she jumped up, and gave chase to Tom. A groom cleaning Sir John's hack at the stables let him go loose, whereby he kicked himself lame in five minutes ; but he ran out, and gave chase to Tom. Grimes upset the soot-sack in the new-gravelled yard, and spoilt it all utterly ; but he ran out, and gave chase to Tom. The old steward opened the park-gate in such a hurry, that he hung his pony's chin upon the spikes, and for aught I know it hangs there still ; but he jumped off, and gave chase to Tom. The ploughman left his horses at the headland, and one jumped over the fence, and pulled the other into the ditch, plough and all ;

but he ran on, and gave chase to Tom. The keeper, who was taking a stoat out of a trap, let the stoat go, and caught his own finger; but he jumped up, and ran after Tom, and, considering what he said and how he looked, I should have been sorry for Tom if he had caught him. Sir John looked out of his study-window (for he was an early old gentleman) and up at the nurse, and a marten dropt mud in his eye, so that he had at last to send for the doctor; and yet he ran out, and gave chase to Tom. The Irishwoman, too, was walking up to the house to beg; she must have got round by some by-way; but she threw away her bundle, and gave chase to Tom likewise. Only my lady did not give chase; for when she had put her head out of the window, her night-wig fell into the garden, and she had to ring up her lady's maid, and send her down for it privately; which quite put her out of the running, so that she came in nowhere, and is consequently not placed.

In a word, never was there heard at Hall Place—not even when the fox was killed in the conservatory, among acres of broken glass, and tons of smashed flower-pots—such a noise, row, hubbub, babel, shindy, hullabaloo, stramash, charivari, and total contempt of dignity, repose, and order, as that day, when Grimes, the gardener, the groom, the dairy-maid, Sir John, the steward, the ploughman, the keeper, and the Irishwoman, all ran up the park, shouting “Stop thief!” in the belief that Tom had at least a thousand pounds worth of jewels in his empty pockets; and the very magpies and jays followed Tom up, screaming and screaming as if he were a hunted fox, beginning to droop his brush.

And all the while poor Tom paddled up the park with his little bare feet, like a small black gorilla fleeing to the forest. Alas for him! there was no big father gorilla therein to take his part; to scratch out the gardener's inside with

one paw, toss the dairy-maid into a tree with another, and wrench off Sir John's head with a third, while he cracked the keeper's skull with his teeth, as easily as if it had been a cocoa-nut or a paving-stone.

However, Tom did not remember ever having had a father ; so he did not look for one, and expected to have to take care of himself ; while, as for running, he could keep up for a couple of miles with any stage-coach, if there was the chance of a copper or a cigar-end, and turn coach-wheels on his hands and feet ten times following, which is more than you can do. Wherefore his pursuers found it very difficult to catch him ; and we will hope that they did not catch him at all.

Tom, of course, made for the woods. He had never been in a wood in his life ; but he was sharp enough to know that he might hide in a bush, or swarm up a tree, and, altogether, had more chance there than in the open field. If he had not known that, he would have been foolisher than a mouse or a minnow.

But when he got into the wood, he found it a very different sort of place from what he had fancied. He pushed into a thick cover of rhododendrons, and found himself at once caught in a trap. The boughs laid hold of his legs and arms, poked him in his face and his stomach, made him shut his eyes tight (though that was no great loss, for he could not see at best a yard before his nose); and when he got through the rhododendrons, the hassock-grass and sedges tumbled him over, and cut his poor little fingers afterwards most spitefully ; the birches birched him as soundly as if he had been a nobleman at Eton, and over the face too (which is not fair switching, as all brave boys will agree); and the lawyers tripped him up, and tore his shins as if they had sharks' teeth—which lawyers are likely enough to have.

"I must get out of this," thought Tom, "or I shall stay

here till somebody comes to help me,—which is just what I don't want."

But how to get out was the difficult matter. And indeed I don't think he would ever have got out at all, but have staid there till the cock-robins covered him with leaves, if he had not suddenly run his head against a wall.

Now, running your head against a wall is not pleasant, especially if it is a loose wall, with the stones all set on edge, and a sharp-cornered one hits you between the eyes, and makes you see all manner of beautiful stars. The stars are very beautiful, certainly ; but unfortunately they go in the twenty-thousandth part of a split second, and the pain which comes after them does not. And so Tom hurt his head ; but he was a brave boy, and did not mind that a penny. He guessed that over the wall the cover would end ; and up it he went, and over like a squirrel.

And there he was, out on the great grouse-moors, which the country folk called Harthover Fell—heather and bog and rock, stretching away and up, up to the very sky.

Now, Tom was a cunning little fellow—as cunning as an old Exmoor stag. Why not? Though he was but ten years old, he had lived longer than most stags, and had more wits to start with into the bargain.

He knew as well as a stag, that if he backed he might throw the hounds out. So the first thing he did when he was over the wall, was, to make the neatest double sharp to his right, and run along under the wall for nearly half a mile.

Whereby Sir John, and the keeper, and the steward, and the gardener, and the ploughman, and the dairymaid, and all the hue-and-cry together, went on ahead half a mile in the very opposite direction, and inside the wall, leaving him a mile off on the outside, while Tom heard their

shouts die away in the wood, and chuckled to himself merrily.

At last he came to a dip in the land, and went to the bottom of it, and then he turned bravely away from the wall, and up the moor; for he knew that he had put a hill between him and his enemies, and could go on without their seeing him.

But the Irish woman, alone of them all, had seen which way Tom went. She had kept ahead of every one the whole time; and yet she neither walked nor ran. She went along quite smoothly and gracefully, while her feet twinkled past each other so fast, that you could not see which was foremost; till every one asked the other who the strange woman was? and all agreed, for want of anything better to say, that she must be in league with Tom.

But when she came to the plantation they lost sight of her; and they could do no less. For she went quietly over the wall after Tom, and followed him wherever he went. Sir John and the rest saw no more of her; and out of sight was out of mind.

And now Tom was right away into the heather, over just such a moor as those in which you have been bred, except that there were rocks and stones lying about everywhere; and that instead of the moor growing flat as he went upwards, it grew more and more broken and hilly; but not so rough but that little Tom could jog along well enough, and find time, too, to stare about at the strange place, which was like a new world to him.

He saw great spiders there, with crowns and crosses marked on their backs, who sat in the middle of their webs, and when they saw Tom coming, shook them so fast that they became invisible. Then he saw lizards, brown and gray and green, and thought they were snakes, and would sting him; but they were as much frightened

as he, and shot away into the heath. And then, under a rock, he saw a pretty sight,—a great brown sharp-nosed creature, with a white tag to her brush, and round her four or five smutty little cubs, the funniest fellows Tom ever saw. She lay on her back, rolling about, and stretching out her legs and head and tail in the bright sunshine; and the cubs jumped over her, and ran round her, and nibbled her paws, and lugged her about by the tail; and she seemed to enjoy it mightily. But one selfish little fellow stole away from the rest to a dead crow close by, and dragged it off to hide it, though it was nearly as big as he was. Whereat all his little brothers set off after him in full cry, and saw Tom; and then all ran back; and up jumped Mrs. Vixen, and caught one up in her mouth, and the rest toddled after her, and into a dark crack in the rocks; and there was an end of the show.

And next he had a fright; for as he scrambled up a sandy brow—whirr-poof-poof-cock-cock-kick—something went off in his face, with a most horrid noise. He thought the ground had blown up, and the end of the world come.

And when he opened his eyes (for he shut them very tight), it was only an old cock-grouse, who had been washing himself in sand, like an Arab, for want of water; and who, when Tom had all but trodden on him, jumped up, with a noise like the express train, leaving his wife and children to shift for themselves, like an old coward; and went off, screaming, “Cur-ru-u-uck, cur-ru-u-uck—murder, thieves, fire—cur-u-uck-cock-kick—the end of the world is come—kick-kick-cock-kick.” He was always fancying that the end of the world was come when anything happened which was farther off than the end of his own nose. But the end of the world was not come, any more than the twelfth of August was, though the old grouse-cock was quite certain of it.

So the old grouse came back to his wife and family an hour afterwards, and said, solemnly, "Cock-cock-kick; my dears, the end of the world is not quite come; but I assure you it is coming the day after to-morrow—cock." But his wife had heard that so often, that she knew all about it, and a little more. And, beside, she was the mother of a family, and had seven little poults to wash and feed every day; and that made her very practical and a little sharp-tempered; so all she answered was: "Kick-kick-kick—go and catch spiders, go and catch spiders—kick."

So Tom went on, and on, he hardly knew why; but he liked the great, wide, strange place, and the cool, fresh, bracing air. But he went more and more slowly as he got higher up the hill; for now the ground grew very bad indeed. Instead of soft turf and springy heather, he met great patches of flat limestone rock, just like ill-made pavements, with deep cracks between the stones and ledges, filled with ferns; so he had to hop from stone to stone, and now and then he slipped in between and hurt his little bare toes, though they were tolerably tough ones; but still he would go on and up, he could not tell why.

What would Tom have said if he had seen, walking over the moor behind him, the very same Irishwoman who had taken his part upon the road? But whether it was that he looked too little behind him, or whether it was that she kept out of sight behind the rocks and knolls, he never saw her, though she saw him.

And now he began to get a little hungry, and very thirsty; for he had run a long way, and the sun had risen high in heaven, and the rock was as hot as an oven, and the air danced reels over it as it does over a lime-kiln, till everything round seemed quivering and melting in the glare,

But he could see nothing to eat anywhere, and still less to drink.

The heath was full of bilberries and whimberries; but they were only in flower yet, for it was June. And as for water, who can find that on the top of a limestone rock? Now and then he passed by a deep dark swallow-hole, going down into the earth as if it was the chimney of some dwarf's house under ground; and more than once, as he passed, he could hear water falling, trickling, tinkling, many, many feet below. How he longed to get down to it, and cool his poor baked lips! But, brave little chimney-sweep as he was, he dared not climb down such chimneys as those.

So he went on, and on, till his head spun round with the heat, and he thought he heard church-bells ringing, a long way off.

"Ah!" he thought, "where there is a church, there will be houses and people; and, perhaps, some one will give me a bit and a sup." So he set off again, to look for the church; for he was sure that he heard the bells quite plain.

And in a minute more, when he looked round, he stopped again, and said, "Why, what a big place the world is!"

And so it was; for, from the top of the mountain, he could see—what could he not see?

Behind him, far below, was Harthover, and the dark woods, and the shining salmon river; and on his left, far below, was the town, and the smoking chimneys of the collieries; and far, far away, the river widened to the shining sea; and little white specks, which were ships, lay on its bosom. Before him lay, spread out like a map, great plains, and farms, and villages, amid dark knots of trees. They all seemed at his very feet; but he had sense to see that they were long miles away.

And to his right rose moor after moor, hill after hill, till they faded away, blue into blue sky. But between him and those moors, and really at his very feet, lay something, to which, as soon as Tom saw it, he determined to go, for that was the place for him.

A deep, deep green and rocky valley, very narrow, and filled with wood ; but through the wood, hundreds of feet below him, he could see a clear stream glance. Oh, if he could but get down to that stream ! Then, by the stream, he saw the roof of a little cottage, and a little garden, set out in squares and beds. And there was a tiny little red thing moving in the garden, no bigger than a fly. As Tom looked down, he saw that it was a woman in a red petticoat. Ah ! perhaps she would give him something to eat. And there were the church-bells ringing again. Surely there must be a village down there. Well, nobody would know him, or what had happened at the Place. The news could not have got there yet, even if Sir John had set all the policemen in the county after him ; and he could get down there in five minutes.

Tom was quite right about the hue-and-cry not having got thither ; for he had come, without knowing it, the best part of ten miles from Harthover ; but he was wrong about getting down in five minutes, for the cottage was more than a mile off, and a good thousand feet below.

However, down he went, like a brave little man as he was, though he was very foot-sore, and tired, and hungry, and thirsty ; while the church-bells rang so loud, he began to think that they must be inside his own head, and the river chimed and tinkled far below ; and this was the song which it sang :—

Clear and cool, clear and cool,
By laughing shallow, and dreaming pool ;
Cool and clear, cool and clear,
By shining shingle, and foaming weir ;

Under the crag where the ouzel sings,
And the ivied wall where the church-bell rings,
 Undefined, for the undefined ;
Play by me, bathe in me, mother and child.

Dank and foul, dank and foul,
By the smoky town in its murky cowl ;
 Foul and dank, foul and dank,
By wharf and sewer and slimy bank ;
Darker and darker the further I go,
Baser and baser the richer I grow ;
 Who dare sport with the sin-defiled ?
Shrink from me, turn from me, mother and child.

Strong and free, strong and free,
The floodgates are open, away to the sea ;
 Free and strong, free and strong,
Cleansing my streams as I hurry along
To the golden sands, and the leaping bar,
And the taintless tide that awaits me afar,
As I lose myself in the infinite main,
Like a soul that has sinned and is pardoned again.
 Undefined, for the undefined,
Play by me, bathe in me, mother and child.

So Tom went down ; and all the while he never saw
the Irishwoman going down behind him.

CHAPTER II.

“AND is there care in heaven ? and is there love
In heavenly spirits to these creatures base
That may compassion of their evils move ?
There is :—else much more wretched were the cast
Of men than beasts : But oh ! the exceeding grace
Of Highest God that loves His creatures so,
And all His works with mercy doth embrace,
That blessed Angels He sends to and fro,
To serve to wicked man, to serve His wicked foe !”

SPENSER.

A MILE off, and a thousand feet down. So Tom found it ; though it seemed as if he could have chucked a pebble on to the back of the woman in the red petticoat, who was weeding in the garden, or even across the dale to the rocks beyond.

For the bottom of the valley was just one field broad, and on the other side ran the stream ; and above it, gray crag, gray down, gray stair, gray moor, walled up to heaven.

A quiet, silent, rich, happy place ; a narrow crack cut deep into the earth ; so deep, and so out of the way, that the bad bogies can hardly find it out. The name of the place is Vendale ; and if you want to see it for yourself, you must go up into the High Craven, and search from Bolland Forest north by Ingleborough, to the Nine Standards and Cross Fell ; and if you have not found it, you must turn south, and search the Lake Mountains, down to Scaw Fell and the sea ; and then if you have not found it, you must go northward again by merry Carlisle, and search the Cheviots all across, from Annan Water to Ber-

wick Law ; and then, whether you have found Vendale or not, you will have found such a country, and such a people, as ought to make you proud of being a British boy.

So Tom went to go down ; and first he went down three hundred feet of steep heather, mixed up with loose brown gritstone, as rough as a file ; which was not pleasant to his poor little heels, as he came bump, stump, jump, down the steep. And still he thought he could throw a stone into the garden.

Then he went down three hundred feet of limestone terraces, one below the other, as straight as if Mr. George White had ruled them with his ruler and then cut them out with his chisel. There was no heath there, but—

First, a little grass slope, covered with the prettiest flowers, rock-rose and saxifrage, and thyme and basil, and all sorts of sweet herbs.

Then bump down a two-foot step of limestone.

Then another bit of grass and flowers.

Then bump down a one-foot step.

Then another bit of grass and flowers for fifty yards, as steep as the house-roof, where he had to slide down on his dear little tail.

Then another step of stone, ten feet high ; and there he had to stop himself, and crawl along the edge to find a crack ; for if he had rolled over, he would have rolled right into the old woman's garden, and frightened her out of her wits.

Then, when he had found a dark narrow crack, full of green-stalked fern, such as hangs in the basket in the drawing-room, and had crawled down through it, with knees and elbows, as he would down a chimney, there was another grass slope, and another step, and so on, till—oh, dear me ! I wish it was all over ; and so did he. And yet he thought he could throw a stone into the old woman's garden.

At last he came to a bank of beautiful shrubs ; white-beam with its great silver-backed leaves, and mountain-ash, and oak ; and below them cliff and crag, cliff and crag, with great beds of crown-ferns and wood-sage ; while through the shrubs he could see the stream sparkling, and hear it murmur on the white pebbles. He did not know that it was three hundred feet below.

You would have been giddy, perhaps, at looking down ; but Tom was not. He was a brave little chimney-sweep ; and when he found himself on the top of a high cliff, instead of sitting down and crying for his baba (though he never had had any baba to cry for), he said—"Ah, this will just suit me !" though he was very tired ; and down he went, by stock and stone, sedge and ledge, bush and rush, as if he had been born a jolly little black ape, with four hands instead of two.

And all the while he never saw the Irishwoman coming down behind him.

But he was getting terribly tired now. The burning sun on the fells had sucked him up ; but the damp heat of the woody crag sucked him up still more ; and the perspiration ran out of the ends of his fingers and toes, and washed him cleaner than he had been for a whole year. But, of course, he dirtied everything terribly as he went. There has been a great black smudge all down the crag ever since. And there have been more black beetles in Vendale since than ever were known before ; all, of course, owing to Tom's having blacked the original papa of them all, just as he was setting off to be married, with a sky-blue coat and scarlet leggings, as smart as a gardener's dog with a polyanthus in his mouth.

At last he got to the bottom. But, behold, it was not the bottom—as people usually find when they are coming down a mountain. For at the foot of the crag were heaps and heaps of fallen limestone of every size from that of

your head to that of a stage-wagon, with holes between them full of sweet heath-fern ; and before Tom got through them, he was out in the bright sunshine again ; and then he felt, once for all and suddenly, as people generally do, that he was b-e-a-t, beat.

You must expect to be beat a few times in your life, little man, if you live such a life as a man ought to live, let you be as strong and healthy as you may ; and when you are, you will find it a very ugly feeling. I hope that that day you may have a stout stanch friend by you who is not beat ; for if you have not, you had best lie where you are, and wait for better times, as poor Tom did.

He could not get on. The sun was burning, and yet he felt chill all over. He was quite empty, and yet he felt quite sick. There was but two hundred yards of smooth pasture between him and the cottage, and yet he could not walk down it. He could hear the stream murmuring only one field beyond it, and yet it seemed to him as if it was a hundred miles off.

He lay down on the grass till the beetles ran over him, and the flies settled on his nose. I don't know when he would have got up again, if the gnats and the midges had not taken compassion on him. But the gnats blew their trumpets so loud in his ear, and the midges nibbled so at his hands and face wherever they could find a place free from soot, that at last he woke up, and stumbled away, down over a low wall, and into a narrow road, and up to the cottage-door.

And a neat pretty cottage it was, with clipt yew-hedges allround the garden, and yews inside too, cut into peacocks and trumpets and teapots and all kinds of queer shapes. And out of the open door came a noise like that of the frogs on the Great-A, when they know that it is going to be scorching hot to-morrow,—and how they know that I don't know, and you don't know, and nobody knows.

He came slowly up to the open door, which was all hung round with clematis and roses ; and then peeped in, half afraid.

And there sat by the empty fireplace, which was filled with a pot of sweet herbs, the nicest old woman that ever was seen, in her red petticoat, and short dimity bedgown, and clean white cap, with a black silk handkerchief over it, tied under her chin. At her feet sat the grandfather of all the cats ; and opposite her sat, on two benches, twelve or fourteen neat rosy chubby little children, learning their Chris-cross-row ; and gabble enough they made about it.

Such a pleasant cottage it was, with a shiny clean stone floor, and curious old prints on the walls, and an old black oak sideboard full of bright pewter and brass dishes, and a cuckoo clock in the corner, which began shouting as soon as Tom appeared ; not that it was frightened at Tom, but that it was just eleven o'clock.

All the children started at Tom's dirty black figure ; the girls began to cry, and the boys began to laugh, and all pointed at him rudely enough ; but Tom was too tired to care for that.

"What art thou, and what dost want?" cried the old dame. "A chimney-sweep ! Away with thee. I'll have no sweeps here."

"Water," said poor little Tom, quite faint.

"Water? There's plenty i' the beck," she said, quite sharply.

"But I can't get there ; I'm most clemmed with hunger and drought." And Tom sank down upon the doorstep, and laid his head against the post.

And the old dame looked at him through her spectacles one minute, and two, and three ; and then she said, "He's sick ; and a bairn's a bairn, sweep or none."

"Water," said Tom.

"God forgive me!" and she put by her spectacles,

and rose, and came to Tom. "Water's bad for thee: I'll give thee milk." And she toddled off into the next room, and brought a cup of milk and a bit of bread.

Tom drank the milk off at one draught, and then looked up, revived.

"Where didst come from?" said the dame.

"Over Fell, there," said Tom, and pointed up into the sky.

"Over Harthover? and down Lewthwaite Crag? Art sure thou art not lying?"

"Why should I?" said Tom, and leant his head against the post.

"And how got ye up there?"

"I came over from the Place," and Tom was so tired and desperate he had no heart or time to think of a story, so he told all the truth in a few words.

"Bless thy little heart! And thou hast not been stealing, then?"

"No."

"Bless thy little heart! and I'll warrant not. Why, God's guided the bairn, because he was innocent? Away from the Place, and over Harthover Fell, and down Lewthwaite Crag! Who ever heard the like, if God hadn't led him? Why dost not eat thy bread?"

"I can't."

"It's good enough, for I made it myself."

"I can't," said Tom, and he laid his head on his knees, and then asked,—

"Is it Sunday?"

"No, then; why should it be?"

"Because I hear the church-bells ringing so."

"Bless thy pretty heart! The bairn's sick. Come wi' me, and I'll hap thee up somewhere. If thou wert a bit cleaner I'd put thee in my own bed, for the Lord's sake. But come along here."

But when Tom tried to get up, he was so tired and giddy that she had to help him and lead him.

She put him in an out-house upon soft sweet hay and an old rug, and bade him sleep off his walk, and she would come to him when school was over, in an hour's time.

And so she went in again, expecting Tom to fall fast asleep at once.

But Tom did not fall asleep.

Instead of it he turned and tossed and kicked about in the strangest way, and felt so hot all over that he longed to get into the river and cool himself; and then he fell half asleep, and dreamt that he heard the little white lady crying to him, "Oh, you're so dirty; go and be washed;" and then that he heard the Irishwoman saying, "Those that wish to be clean, clean they will be." And then he heard the church-bells ring so loud, close to him, too, that he was sure it must be Sunday, in spite of what the old dame had said; and he would go to church, and see what a church was like inside, for he had never been in one, poor little fellow, in all his life. But the people would never let him come in, all over soot and dirt like that. He must go to the river and wash first. And he said out loud again and again, though being half asleep he did not know it, "I must be clean, I must be clean."

And all of a sudden he found himself, not in the out-house on the hay, but in the middle of a meadow, over the road, with the stream just before him, saying continually, "I must be clean, I must be clean." He had got there on his own legs, between sleep and awake, as children will often get out of bed, and go about the room, when they are not quite well. But he was not a bit surprised, and went on to the bank of the brook, and lay down on the grass, and looked into the clear limestone water, with every pebble at the bottom bright and clean, while the

little silver trout dashed about in fright at the sight of his black face ; and he dipped his hand in and found it so cool, cool, cool ; and he said, " I will be a fish ; I will swim in the water ; I must be clean, I must be clean. "

So he pulled off all his clothes in such haste that he tore some of them, which was easy enough with such ragged old things. And he put his poor hot sore feet into the water ; and then his legs ; and the further he went in, the more the church-bells rang in his head.

" Ah, " said Tom, " I must be quick and wash myself ; the bells are ringing quite loud now : and they will stop soon, and then the door will be shut, and I shall never be able to get in at all. "

Tom was mistaken : for in England the church-doors are left open all service-time for everybody who likes to come in, Churchman or Dissenter ; ay, even if he were a Turk or a Heathen ; and if any man dared to turn him out, as long as he behaved quietly, the good old English law would punish that man, as he deserved, for ordering any peaceable person out of God's house, which belongs to all alike. But Tom did not know that, any more than he knew a great deal more which people ought to know.

And all the while he never saw the Irishwoman : not behind him this time, but before.

For just before he came to the river-side, she had stepped down into the cool clear water ; and her shawl and her petticoat floated off her, and the green water-weeds floated round her sides, and the white water-lilies floated round her head, and the fairies of the stream came up from the bottom, and bore her away and down upon their arms ; for she was the Queen of them all ; and perhaps of more besides.

" Where have you been ? " they asked her.

" I have been smoothing sick folk's pillows, and whispering sweet dreams into their ears ; opening cottage

casements, to let out the stifling air ; coaxing little children away from gutters and foul pools, where fever breeds ; turning women from the gin-shop door and staying men's hands as they were going to strike their wives ; doing all I can to help those who will not help themselves : and little enough that is, and weary work for me. But I have brought you a new little brother, and watched him safe all the way here."

Then all the fairies laughed for joy at the thought that they had a little brother coming.

"But mind, maidens, he must not see you, or know that you are here. He is but a savage now, and like the beasts which perish ; and from the beasts which perish he must learn. So you must not play with him, or speak to him, or let him see you ; but only keep him from being harmed."

Then the fairies were sad, because they could not play with their new brother ; but they always did what they were told.

And their Queen floated away down the river ; and hither she went, thither she came. But all this, Tom, of course, never saw or heard ; and perhaps if he had, it would have made little difference in the story ; for he was so hot and thirsty, and longed so to be clean for once, that he tumbled himself as quick as he could into the clear cool stream.

And he had not been in it two minutes before he fell fast asleep, into the quietest, sunniest, cosiest sleep that ever he had in his life ; and he dreamt about the green meadows by which he had walked that morning, and the tall elm-trees, and the sleeping cows : and after that he dreamt of nothing at all.

The reason of his falling into such a delightful sleep is very simple ; and yet hardly any one has found it out. It was merely that the fairies took him.

Some people think that there are no fairies. Cousin Cramchild tells little folks so in his Conversations. Well, perhaps there are none—in Boston, U. S., where he was raised. There are only a clumsy lot of spirits there, who can't make people hear without thumping on the table ; but they get their living thereby, and I suppose that is all they want. And Aunt Agitate, in her Arguments on political economy, says there are none. Well, perhaps there are none—in her political economy. But it is a wide world, my little man,—and thank Heaven for it, for else, between crinolines and theories, some of us would get squashed,—and plenty of room in it for fairies, without people seeing them ; unless, of course, they look in the right place. The most wonderful and the strongest things in the world, you know, are just the things which no one can see. There is life in you ; and it is the life in you which makes you grow, and move, and think : and yet you can't see it. And there is steam in a steam-engine ; and that is what makes it move : and yet you can't see it. And so there may be fairies in the world, and they may be just what makes the world go round to the old tune of

“ C'est l'amour, l'amour, l'ameur
Qui fait la monde à la ronde ” :

and yet no one may be able to see them except those whose hearts are going round to that same tune. At all events, we will make believe that there are fairies in the world. It will not be the last time by many a one that we shall have to make believe. And yet, after all, there is no need for that. There must be fairies ; for this is a fairy-tale : and how can one have a fairy-tale if there are no fairies ?

You don't see the logic of that ? Perhaps not. Then please not to see the logic of a great many arguments

exactly like it, which you will hear before your beard is gray.

The kind old dame came back at twelve, when school was over, to look at Tom ; but there was no Tom there. She looked about for his footprints ; but the ground was so hard that there was no slot, as they say in dear old North Devon. And if you grow up to be a brave healthy man, you may know some day what no slot means, and know, too, I hope, what a slot does mean,—a broad slot, with blunt claws, which makes a man put out his cigar, and set his teeth, and tighten his girths, when he sees it ; and what his rights mean, if he has them, brow, bay, tray, and points ; and see something worth seeing between Haddon Wood and Countisbury Cliff, with good Mr. Palk Collyns to show you the way, and mend your bones as fast as you smash them. Only when that jolly day comes, please don't break your neck : stogged in a mire you never will be, I trust for you are a heath-cropper bred and born.

So the old dame went in again quite sulky, thinking that little Tom had tricked her with a false story, and shammed ill, and then ran away again.

But she altered her mind the next day. For, when Sir John and the rest of them had run themselves out of breath, and lost Tom, they went back again, looking very foolish.

And they looked more foolish still when Sir John heard more of the story from the nurse ; and more foolish still, again, when they heard the whole story from Miss Ellie, the little lady in white. All she had seen was a poor little black chimney-sweep, crying and sobbing, and going to get up the chimney again. Of course, she was very much frightened ; and no wonder. But that was all. The boy had taken nothing in the room ; by the mark of his little sooty feet, they could see that he had never been off the

hearth-rug till the nurse caught hold of him. It was all a mistake.

So Sir John told Grimes to go home, and promised him five shillings if he would bring the boy quietly up to him, without beating him, that he might be sure of the truth. For he took for granted, and Grimes, too, that Tom had made his way home.

But no Tom came back to Mr. Grimes that evening ; and he went to the police-office, to tell them to look out for the boy. But no Tom was heard of. As for his having gone over those great fells to Vendale, they no more dreamed of that than of his having gone to the moon.

So Mr. Grimes came up to Harthover next day with a very sour face ; but when he got there, Sir John was over the hills and far away ; and Mr. Grimes had to sit in the outer servants' hall all day, and drink strong ale to wash away his sorrows ; and they were washed away, long before Sir John came back.

For good Sir John had slept very badly that night ; and he said to his lady, " My dear, the boy must have got over into the grouse-moors, and lost himself ; and he lies very heavily on my conscience, poor little lad. But I know what I will do."

So, at five the next morning up he got, and into his bath, and into his shooting-jacket and gaiters, and into the stable-yard, like a fine old English gentleman, with a face as red as a rose, and a hand as hard as a table, and a back as broad as a bullock's ; and bade them bring his shooting-pony, and the keeper to come on his pony, and the huntsman, and the first whip, and the second whip, and the under-keeper with the bloodhound in a leash,—a great dog as tall as a calf, of the color of a gravel walk, with mahogany ears and nose, and a throat like a church-bell. They took him up to the place where Tom had

gone into the wood ; and there the hound lifted up his mighty voice, and told them all he knew.

Then he took them to the place where Tom had climbed the wall ; and they shoved it down, and all got through.

And then the wise dog took them over the moor, and over the fells, step by step, very slowly ; for the scent was a day old, you know, and very light from the heat and drought. But that was why cunning old Sir John started at five in the morning.

And at last he came to the top of Lewthwaite Crag and there he bayed, and looked up in their faces, as much as to say, " I tell you he is gone down here ! "

They could hardly believe that Tom would have gone so far ; and when they looked at that awful cliff, they could never believe that he would have dared to face it. But if the dog said so, it must be true.

" Heaven forgive us ! " said Sir John. " If we find him at all, we shall find him lying at the bottom. " And he slapped his great hand upon his great thigh, and said,—

" Who will go down over Lewthwaite Crag, and see if that boy is alive ? Oh that I were twenty years younger, and I would go down myself ! " And so he would have done, as well as any sweep in the county. Then he said,—

" Twenty pounds to the man who brings me that boy alive ! " and, as was his way, what he said he meant.

Now, among the lot was a little groom-boy, a very little groom indeed ; and he was the same who had ridden up the court, and told Tom to come to the Hall ; and he said,—

" Twenty pounds or none, I will go down over Lewthwaite Crag, if it's only for the poor boy's sake. For he was as civil a spoken little chap as ever climbed a flue. "

So down over Lewthwaite Crag he went: a very smart groom he was at the top, and a very shabby one at the bottom; for he tore his gaiters, and he tore his breeches, and he tore his jacket, and he burst his braces, and he burst his boots, and he lost his hat, and, what was worst of all, he lost his shirt-pin, which he prized very much, for it was gold, and he had won it in a raffle at Malton, and there was a figure at the top of it of t'ould mare, noble old Beeswing herself, as natural as life; so it was a really severe loss: but he never saw anything of Tom.

And all the while Sir John and the rest were riding round, full three miles to the right, and back again, to get into Vendale, and to the foot of the crag.

When they came to the old dame's school, all the children came out to see. And the old dame came out too; and when she saw Sir John she courtesied very low, for she was a tenant of his.

"Well, dame, and how are you?" said Sir John.

"Blessings on you as broad as your back, Harthover," says she,—she didn't call him Sir John, but only Harthover, for that is the fashion in the North country,—“and welcome into Vendale: but you're no hunting the fox this time of year?"

"I am hunting, and strange game too," said he.

"Blessings on your heart; and what makes you look so sad the morn?"

"I'm looking for a lost child, a chimney-sweep, that is run away."

"Oh, Harthover, Harthover," says she, "ye were always a just man and a merciful; and ye'll no harm the poor little lad if I give you tidings of him?"

"Not I, not I, dame. I'm afraid we hunted him out of the house all on a miserable mistake, and the hound has brought him to the top of Lewthwaite Crag, and—"

Whereat the old dame broke out crying, without letting him finish his story.

“So he told me the truth after all, poor little dear ! Ah, first thoughts are best, and a body’s heart’ll guide them right, if they will but hearken to it.” And then she told Sir John all.

“Bring the dog here, and lay him on,” said Sir John, without another word, and he set his teeth very hard.

And the dog opened at once ; and went away at the back of the cottage, over the road, and over the meadow, and through a bit of alder copse ; and there, upon an alder stump, they saw Tom’s clothes lying. And then they knew as much about it all as there was any need to know.

And Tom ?

Ah, now comes the most wonderful part of this wonderful story. Tom, when he woke, for of course he woke,—children always wake after they have slept exactly as long as is good for them,—found himself swimming about in the stream, being about four inches, or—that I may be accurate—3.87902 inches long, and having round the parotid region of his fauces a set of external gills (I hope you understand all the big words) just like those of a sucking eft, which he mistook for a lace frill, till he pulled at them, found he hurt himself, and made up his mind that they were part of himself, and best left alone.

In fact, the fairies had turned him into a water-baby.

A water-baby ? You never heard of a water-baby. Perhaps not. That is the very reason why this story was written. There are a great many things in the world which you never heard of ; and a great many more which nobody ever heard of ; and a great many things, too, which nobody will ever hear of, at least until the coming

of the Cocqigrues, when man shall be the measure of all things.

“But there are no such things as water-babies.”

How do you know that? Have you been there to see? And if you had been there to see, and had seen none, that would not prove that there were none. If Mr. Garth does not find a fox in Eversley Wood—as folks sometimes fear he never will—that does not prove that there are no such things as foxes. And as is Eversley Wood to all the woods in England, so are the waters we know to all the waters in the world. And no one has a right to say that no water-babies exist, till they have seen no water-babies existing; which is quite a different thing, mind, from not seeing water-babies; and a thing which nobody ever did, or perhaps ever will do.

“But surely if there were water-babies, somebody would have caught one at least?”

Well. How do you know that somebody has not?

“But they would have put it into spirits, or into the ‘Illustrated News,’ or perhaps cut it into two halves, poor dear little thing! and sent one to Professor Owen, and one to Professor Huxley, to see what they would each say about it.”

Ah, my dear little man! that does not follow at all, as you will see before the end of the story.

“But a water-baby is contrary to nature.”

Well, but, my dear little man, you must learn to talk about such things, when you grow older, in a very different way from that. You must not talk about “ain’t” and “can’t” when you speak of this great wonderful world round you, of which the wisest man knows only the very smallest corner, and is, as the great Sir Isaac Newton said, only a child picking up pebbles on the shore of a boundless ocean.

You must not say that this cannot be, or that that is

contrary to nature. You do not know what nature is, or what she can do ; and nobody knows ; not even Sir Roderick Murchison, or Professor Owen, or Professor Sedgwick, or Professor Huxley, or Mr. Darwin, or Professor Faraday, or Mr. Grove, or any other of the great men whom good boys are taught to respect. They are very wise men ; and you must listen respectfully to all they say ; but even if they should say, which I am sure they never would, "That cannot exist. That is contrary to nature," you must wait a little, and see ; for perhaps even they may be wrong. It is only children who read Aunt Agitate's Arguments, or Cousin Cramchild's Conversations ; or lads who go to popular lectures, and see a man pointing at a few big ugly pictures on the wall, or making nasty smells with bottles and squirts, for an hour or two, and calling that anatomy or chemistry—who talk about "cannot exist," and "contrary to nature." Wise men are afraid to say that there is anything contrary to nature, except what is contrary to mathematical truth ; for two and two cannot make five, and two straight lines cannot join twice, and a part cannot be as great as the whole, and so on (at least, so it seems at present) ; but the wiser men are, the less they talk about "cannot." That is a very rash, dangerous word, that "cannot" ; and if people use it too often, the Queen of all the Fairies, who makes the clouds thunder and the fleas bite, and takes just as much trouble about one as about the other, is apt to astonish them suddenly by showing them, that, though they say she cannot, yet she can, and what is more, will, whether they approve or not.

And therefore it is, that there are dozens and hundreds of things in the world which we should certainly have said were contrary to nature, if we did not see them going on under our eyes all day long. If people had never seen little seeds grow into great plants and trees, of quite differ-

ent shape from themselves, and these trees again produce fresh seeds, to grow into fresh trees, they would have said, "The thing cannot be ; it is contrary to nature." And they would have been quite as right in saying so as in saying that most other things cannot be.

Or suppose, again, that you had come, like M. Du Chaillu, a traveller from unknown parts ; and that no human being had ever seen or heard of an elephant. And suppose that you described him to people, and said, "This is the shape, and plan, and anatomy of the beast, and of his feet, and of his trunk, and of his grinders, and of his tusks, though they are not tusks at all, but two fore-teeth run mad ; and this is the section of his skull, more like a mushroom than a reasonable skull of a reasonable or unreasonable beast ; and so forth and so forth ; and though the beast (which I assure you I have seen and shot) is first cousin to the little hairy coney of Scripture, second cousin to a pig, and (I suspect) thirteenth or fourteenth cousin to a rabbit, yet he is the wisest of all beasts, and can do everything save read, write, and cast accounts ;" people would surely have said, "Nonsense ; your elephant is contrary to nature ;" and have thought you were telling stories,—as the French thought of La Vailant when he came back to Paris and said that he had shot a giraffe ; and as the king of the Cannibal Islands thought of the English sailor, when he said that in his country water turned to marble, and rain fell as feathers. They would tell you, the more they knew of science, "Your elephant is an impossible monster, contrary to the laws of comparative anatomy, as far as yet known." To which you would answer the less the more you thought.

Did not learned men, too, hold, till within the last twenty-five years, that a flying dragon was an impossible monster ? And do we not now know that there are hundreds of them found fossil up and down the world ?

People call them Pterodactyles, but that is only because they are ashamed to call them flying dragons, after denying so long that flying dragons could exist. And has not a German only lately discovered, what is most monstrous of all, that some of these flying dragons, lizards though they are, had feathers? * And if that last is not contrary to what people mean by nature nowadays, one hardly knows what is.

The truth is, that folks' fancy that such and such things cannot be, simply because they have not seen them, is worth no more than a savage's fancy that there cannot be such a thing as a locomotive, because he never saw one running wild in the forest. Wise men know that their business is to examine what is, and not to settle what is not. They know that there are elephants; they know that there have been flying dragons; and the wiser they are, the less inclined they will be to say positively that there are no water-babies.

No water-babies, indeed? Why, wise men of old said that everything on earth had its double in the water: and you may see that that is, if not quite true, still quite as true as most other theories which you are likely to hear for many a day. There are land-babies—then, why not water-babies? Are there not water-rats, water-flies, water-crickets, water-crabs, water-tortoises, water-scorpions, water-tigers and water-hogs, water-cats and water-dogs, sea-lions and sea-bears, sea-horses and sea-elephants, sea-mice and sea-urchins, sea-razors and sea-pens, sea-combs and sea-fans; and of plants, are there not water-grass and water-crowfoot, water-milfoil, and so on, without end?

“But all these things are only nicknames; the water things are not really akin to the land things.”

* This was written before Professor Owen's Memoir of November 20, 1862, showing that the *Archæopteryx* is certainly a bird.

That's not always true. They are, in millions of cases, not only of the same family, but actually the same individual creatures. Do not even you know that a green drake, and an alder-fly, and a dragon-fly live under water till they change their skins, just as Tom changed his? And if a water-animal can continually change into a land-animal, why should not a land-animal sometimes change into a water-animal? Don't be put down by any of Cousin Cramchild's arguments, but stand up to him like a man, and answer him (quite respectfully, of course) thus :—

If Cousin Cramchild says, that, if there are water-babies, they must grow into water-men, ask him how he knows that they do not? and then, how he knows that they must, any more than the Proteus of the Adelsberg caverns grows into a perfect newt?

If he says that it is too strange a transformation for a land-baby to turn into a water-baby, ask him if he ever heard of the transformation of Syllis, or the Distomas, or the common jelly-fish, of which M. Quatrefages says excellently well—"Who would not exclaim that a miracle had come to pass, if he saw a reptile come out of the egg dropped by the hen in his poultry-yard, and the reptile give birth at once to an indefinite number of fishes and birds? Yet the history of the jelly-fish is quite as wonderful as that would be." Ask him if he knows about all this and if he does not, tell him to go and look for himself, and advise him (very respectfully, of course) to settle no more what strange things cannot happen, till he has seen what strange things do happen every day.

If he says that things cannot degrade, that is, change downwards into lower forms, ask him, who told him that water-babies were lower than land-babies? But even if they were, does he know about the strange degradation of the common goose-barnacles, which one finds sticking on ships' bottoms; or the still stranger degradation of some

cousins of theirs, of which one hardly likes to talk, so shocking and ugly it is?

And, lastly, if he says (as he most certainly will) that these transformations only take place in the lower animals, and not in the higher, say that that seems to little boys, and to some grown people, a very strange fancy. For if the changes of the lower animals are so wonderful, and so difficult to discover, why should not there be changes in the higher animals far more wonderful, and far more difficult to discover? And may not man, the crown and flower of all things, undergo some change as much more wonderful than all the rest, as the Great Exhibition is more wonderful than a rabbit-burrow? Let him answer that. And if he says (as he will) that not having seen such a change in his experience, he is not bound to believe it, ask him respectfully where his microscope has been? Does not each of us, in coming into this world, go through a transformation just as wonderful as that of a sea-egg, or a butterfly? and does not reason and analogy, as well as Scripture, tell us that that transformation is not the last? and that, though what we shall be we know not, yet we are here but as the crawling carterpillar, and shall be hereafter as the perfect fly. The old Greeks, heathens as they were, saw as much as that two thousand years ago; and I care very little for Cousin Cramchild, if he sees even less than they. And so forth, and so forth, till he is quite cross. And then tell him that if there are no water-babies, at least there ought to be; and that, at least, he cannot answer.

And meanwhile, my dear little man, till you know a great deal more about nature than Professor Owen and Professor Huxley, put together, don't tell me about what cannot be, or fancy that anything is too wonderful to be true. "We are fearfully and wonderfully made," said old David: and so we are; and so is everything around us,

down to the very deal table. Yes ; much more fearfully and wonderfully made already is the table, as it stands now, nothing but a piece of dead deal wood, than if, as foxes say and geese believe, spirits could make it dance, or talk to you by rapping on it.

Am I in earnest ? Oh dear no. Don't you know that this is a fairy-tale, and all fun and pretence ; and that you are not to believe one word of it, even if it is true ?

But at all events, so it happened to Tom. And, therefore, the keeper, and the groom, and Sir John, made a great mistake, and were very unhappy (Sir John at least) without any reason, when they found a black thing in the water, and said it was Tom's body, and that he had been drowned. They were utterly mistaken. Tom was quite alive, and cleaner and merrier than he ever had been. The fairies had washed him, you see, in the swift river, so thoroughly, that not only his dirt, but his whole husk and shell had been washed quite off him, and the pretty little real Tom was washed out of the inside of it, and swam away, as a caddis does when its case of stones and silk is bored through, and away it goes on its back, paddling to the shore, there to split its skin, and fly away as a caperer, on four fawn-colored wings with long legs and horns. They are foolish fellows, the caperers, and fly into the candle at night, if you leave the door open. We will hope Tom will be wiser, now he has got safe out of his sooty old shell.

But good Sir John did not understand all this, not being a fellow of the Linnæan Society ; and he took it into his head that Tom was drowned. When they looked into the empty pockets of his shell, and found no jewels there, nor money,—nothing but three marbles, and a brass button with a string to it—then Sir John did something as like crying as ever he did in his life, and blamed himself more bitterly than he need have done. So he cried, and the

groom-boy cried, and the huntsman cried, and the dame cried, and the little girl cried, and the dairy-maid cried, and the old nurse cried (for it was somewhat her fault), and my lady cried, for though people have wigs, that is no reason why they should not have hearts : but the keeper did not cry, though he had been so good-natured to Tom the morning before ; for he was so dried up with running after poachers, that you could no more get tears out of him than milk out of leather : and Grimes did not cry, for Sir John gave him ten pounds, and he drank it all in a week. Sir John sent, far and wide, to find Tom's father and mother : but he might have looked till Doomsday for them, for one was dead, and the other was in Botany Bay. And the little girl would not play with her dolls for a whole week, and never forgot poor little Tom. And soon my lady put a pretty little tombstone over Tom's shell in the little churchyard in Vendale, where the old dalesmen all sleep side by side between the limestone crags. And the dame decked it with garlands every Sunday, till she grew so old that she could not stir abroad ; then the little children decked it for her. And always she sung an old old song, as she sat spinning what she called her wedding-dress. The children could not understand it, but they liked it none the less for that ; for it was very sweet, and very sad ; and that was enough for them. And these are the words of it : —

WHEN all the world is young, lad,
And all the trees are green ;
And every goose a swan, lad,
And every lass a queen ;
Then hey for boot and horse, lad,
And round the world away :
Young blood must have its course, lad,
And every dog his day.

When all the world is old, lad,
And all the trees are brown;
And all the sport is stale, lad,
And all the wheels run down ;
Creep home and take your place *there*,
The spent and maimed among :
God grant you find one face there
You loved when all was young.

Those are the words : but they are only the body of it ; the soul of the song was the dear old woman's sweet face, and sweet voice, and the sweet old air to which she sang ; and that, alas ! one cannot put on paper. And at last she grew so stiff and lame, that the angels were forced to carry her ; and they helped her on with her wedding-dress, and carried her up over Harthover Fells, and a long way beyond that too ; and there was a new schoolmistress in Vendale, and we will hope that she was not certificated.

And all the while Tom was swimming about in the river, with a pretty little lace-collar of gills about his neck, as lively as a grig, and as clean as a fresh run salmon.

Now if you don't like my story, then go to the school-room and learn your multiplication-table, and see if you like that better. Some people, no doubt, would do so. So much the better for us, if not for them. It takes all sorts they say, to make a world.

CHAPTER III.

"HE prayeth well who loveth well,
Both men and bird and beast ;
He prayeth best who loveth best
All things both great and small :
For the dear God who loveth us
He made and loveth all."

COLERIDGE.

TOM was now quite amphibious. You do not know what that means? You had better, then, ask the nearest Government pupil-teacher, who may possibly answer you smartly enough, thus,—

"*Amphibious*.—Adjective, derived from two Greek words : *amphi*, a fish, and *bios*, a beast. An animal supposed by our ignorant ancestors to be compounded of a fish and a beast ; which, therefore, like the hippopotamus, can't live on the land, and dies in the water."

However that may be, Tom was amphibious ; and what is better still, he was clean. For the first time in his life he felt how comfortable it was to have nothing on him but himself. But he only enjoyed it : he did not know it, or think about it ; just as you enjoy life and health, and yet never think about being alive and healthy : and may it be long before you have to think about it !

He did not remember having ever been dirty. Indeed, he did not remember any of his old troubles,—being tired, or hungry, or beaten, or sent up dark chimneys. Since that sweet sleep, he had forgotten all about his master, and Harthover Place, and the little white girl, and

in a word all that had happened to him when he lived before; and what was best of all, he had forgotten all the bad words which he had learnt from Grimes and the rude boys with whom he used to play.

That is not strange: for you know, when you came into this world, and became a land-baby, you remembered nothing. So why should he, when he became a water-baby?

Then have you lived before?

My dear child, who can tell? One can only tell that, by remembering something which happened where we lived before; and as we remember nothing, we know nothing about it; and no book, and no man, can ever tell us certainly.

There was a wise man once, a very wise man, and a very good man, who wrote a poem about the feelings which some children have about having lived before; and this is what he said:—

“ Our birth is but a sleep and a forgetting ;
 The soul that rises with us, our life's star,
 Hath elsewhere had its setting,
 And cometh from afar :
 Not in entire forgetfulness,
 And not in utter nakedness,
But trailing clouds of glory, do we **come**
 From God, who is our home.”

There, you can know no more than that. But if I was you, I would believe that. For then the great fairy Science, who is likely to be queen of all the fairies for many a year to come, can only do you good, and never do you harm; and instead of fancying, with some people, that your body makes your soul, as if a steam-engine could make its own coke; or, with some other people, that your soul has nothing to do with your body, but is

only stuck into it like a pin into a pin-cushion, to fall out with the first shake ;—you will believe the one true,

orthodox,	inductive,
rational,	deductive,
philosophical,	seductive,
logical,	productive,
irrefragable,	salutary,
nominalistic,	comfortable,
realistic,	

and on-all-accounts-to-be-received

doctrine of this wonderful fairy-tale ; which is, that **your** soul makes **your** body, just as a snail makes his shell. For the rest, it is enough for us to be sure that whether or not we lived before, we shall live again ; though not, I hope, as poor little heathen Tom did. For he went downward into the water : but we, I hope, shall go upward to a very different place.

But Tom was very happy in the water. He had been sadly overworked in the land-world ; and so now, to make up for that, he had nothing but holidays in the water-world for a long, long time to come. He had nothing to do now but enjoy himself, and look at all the pretty things which are to be seen in the cool clear water-world, where the sun is never too hot, and the frost is never too cold.

And what did he live on ? Water-cresses, perhaps ; or perhaps water-gruel, and water-milk : too many land-babies do so likewise. But we do not know what one tenth of the water-things eat ; so we are not answerable for the water-babies.

Sometimes he went along the smooth gravel water-ways, looking at the crickets which ran in and out among the stones, as rabbits do on land ; or he climbed over the ledges of rock, and saw the sand-pipes hanging in thousands, with every one of them a pretty little head and

legs peeping out ; or he went into a still corner, and watched the caddises eating dead sticks as greedily as you would eat plum-pudding, and building their houses with silk and glue. Very fanciful ladies they were ; none of them would keep to the same materials for a day. One would begin with some pebbles ; then she would stick on a piece of green weed ; then she found a shell, and stuck it on too ; and the poor shell was alive, and did not like at all being taken to build houses with : but the caddis did not let him have any voice in the matter, being rude and selfish, as vain people are apt to be ; then she stuck on a piece of rotten wood, then a very smart pink stone, and so on, till she was patched all over like an Irishman's coat. Then she found a long straw, five times as long as herself, and said, " Hurrah ! my sister has a tail, and I'll have one too ; " and she stuck it on her back, and marched about with it quite proud, though it was very inconvenient indeed. And, at that, tails became all the fashion among the caddis-baits in that pool, as they were at the end of the Long Pond last May, and they all toddled about with long straws sticking out behind, getting between each other's legs, and tumbling over each other, and looking so ridiculous, that Tom laughed at them till he cried, as we did. But they were quite right, you know ; for people must always follow the fashion, even if it be spoon-bonnets.

Then sometimes he came to a deep still reach ; and there he saw the water-forests. They would have looked to you only little weeds : but Tom, you must remember, was so little that everything looked a hundred times as big to him as it does to you, just as things do to a minnow, who sees and catches the little water-creatures which you can only see in a microscope.

And in the water-forest he saw the water-monkeys and water-squirrels (they had all six legs, though ; everything

almost has six legs in the water, except efts and water-babies); and nimbly enough they ran among the branches. There were water-flowers there, too, in thousands; and Tom tried to pick them: but as soon as he touched them, they drew themselves in and turned into knots of jelly; and then Tom saw that they were all alive,—bells, and stars, and wheels, and flowers, of all beautiful shapes and colors; and all alive and busy just as Tom was. So now he found that there was a great deal more in the world than he had fancied at first sight.

There was one wonderful little fellow, too, who peeped out of the top of a house built of round bricks. He had two big wheels, and one little one, all over teeth, spinning round and round like the wheels in a thrashing-machine; and Tom stood and stared at him, to see what he was going to make with his machinery. And what do you think he was doing? Brick-making. With his two big wheels he swept together all the mud which floated in the water: all that was nice in it he put into his stomach and ate; and all the mud he put into the little wheel on his breast, which really was a round hole set with teeth; and there he spun it into a neat hard round brick; and then he took it and stuck it on the top of his house-wall, and set to work to make another. Now was not he a clever little fellow?

Tom thought so: but when he wanted to talk to him, the brick-maker was much too busy and proud of his work to take notice of him.

Now you must know that all the things under the water talk: only not such a language as ours; but such as horses, and dogs, and cows, and birds talk to each other; and Tom soon learned to understand them and talk to them; so that he might have had very pleasant company if he had only been a good boy. But I am sorry to say, he was too like some other little boys, very fond of hunt-

ing and tormenting creatures for mere sport. Some people say that boys cannot help it; that it is nature, and only a proof that we are all originally descended from beasts of prey. But whether it is nature or not, little boys can help it, and must help it. For if they have naughty, low, mischievous tricks in their nature, as monkeys have, that is no reason why they should give way to those tricks like monkeys, who know no better. And therefore they must not torment dumb creatures; for if they do, a certain old lady who is coming will surely give them exactly what they deserve.

But Tom did not know that; and he pecked and howked the poor water-things about sadly, till they were all afraid of him, and got out of his way, or crept into their shells; so he had no one to speak to or play with.

The water-fairies, of course, were very sorry to see him so unhappy, and longed to take him, and tell him how naughty he was, and teach him to be good, and to play and romp with him too: but they had been forbidden to do that. Tom had to learn his lesson for himself by sound and sharp experience, as many another foolish person has to do, though there may be many a kind heart yearning over them all the while, and longing to teach them what they can only teach themselves.

At last one day he found a caddis, and wanted it to peep out of its house: but its house-door was shut. He had never seen a caddis with a house-door before: so what must he do, the meddlesome little fellow, but pull it open, to see what the poor lady was doing inside. What a shame! How should you like to have any one breaking your bedroom-door in, to see how you looked when you were in bed? So Tom broke to pieces the door, which was the prettiest little grating of silk, stuck all over with shining bits of crystal; and when he looked in, the caddis poked out her head, and it had turned into just the shape

of a bird's. But when Tom spoke to her she could not answer; for her mouth and face were tight tied up in a new nightcap of neat pink skin. However, if she didn't answer, all the other caddises did; for they held up their hands and shrieked like the cats in *Struwelpeter*: "Oh, you nasty horrid boy; there you are at it again! And she had just laid herself up for a fortnight's sleep, and then she would have come out with such beautiful wings, and flown about, and laid such a lots of eggs: and now you have broken her door, and she can't mend it because her mouth is tied up for a fortnight, and she will die. Who sent you here to worry us out of our lives?"

So Tom swam away. He was very much ashamed of himself, and felt all the naughtier; as little boys do when they have done wrong, and won't say so.

Then he came to a pool full of little trout, and began tormenting them, and trying to catch them: but they slipt through his fingers, and jumped clean out of water in their fright. But as Tom chased them, he came close to a great dark hover under an alder-root, and out flouched a huge old brown trout, ten times as big as he was, and ran right against him, and knocked all the breath out of his body; and I don't know which was the more frightened of the two.

Then he went on sulky and lonely, as he deserved to be; and under a bank he saw a very ugly dirty creature sitting, about half as big as himself, which had six legs, and a big stomach, and a most ridiculous head with two great eyes and a face just like a donkey's.

"Oh," said Tom, "you are an ugly fellow to be sure!" and he began making faces at him; and put his nose close to him, and halloed at him, like a very rude boy.

When, hey presto! all the thing's donkey-face came off in a moment, and out popped a long arm with a pair of pincers at the end of it, and caught Tom by the nose.

It did not hurt him much ; but it held him quite tight.

“Yah, ah ! Oh, let me go !” cried Tom.

“Then let me go,” said the creature. “I want to be quiet. I want to split.”

Tom promised to let him alone, and he let go. “Why do you want to split ?” said Tom.

“Because my brothers and sisters have all split, and turned into beautiful creatures with wings ; and I want to split too. Don’t speak to me. I am sure I shall split. I will split !”

Tom stood still, and watched him. And he swelled himself, and puffed, and stretched himself out stiff, and at last—crack, puff, bang—he opened all down his back, and then up to the top of his head.

And out of his inside came the most slender, elegant, soft creature, as soft and smooth as Tom : but very pale and weak, like a little child who has been ill a long time in a dark room. It moved its legs very feebly ; and looked about it half ashamed, like a girl when she goes for the first time into a ball-room ; and then it began walking slowly up a grass stem to the top of the water.

Tom was so astonished that he never said a word ; but he stared with all his eyes. And he went up to the top of the water too, and peeped out to see what would happen.

And as the creature sat in the warm bright sun, a wonderful change came over it. It grew strong and firm ; the most lovely colors began to show on its body, blue and yellow and black, spots and bars and rings ; out of its back rose four great wings of bright brown gauze ; and its eyes grew so large that they filled all its head, and shone like ten thousand diamonds.

“Oh, you beautiful creature !” said Tom ; and he put out his hand to catch it.

But the thing whirled up into the air, and hung poised

on its wings a moment, and then settled down again by Tom quite fearless.

"No!" it said, "you cannot catch me. I am a dragon-fly now, the king of all the flies; and I shall dance in the sunshine, and hawk over the river, and catch gnats, and have a beautiful wife like myself. I know what I shall do. Hurrah!" And he flew away into the air, and began catching gnats.

"Oh! come back, come back," cried Tom, "you beautiful creature! I have no one to play with, and I am so lonely here. If you will but come back I will never try to catch you."

"I don't care whether you do or not," said the dragon-fly; "for you can't. But when I have had my dinner, and looked a little about this pretty place, I will come back; and have a little chat about all I have seen in my travels. Why, what a huge tree this is! and what huge leaves on it!"

It was only a big dock: but you know the dragon-fly had never seen any but little water-trees; starwort, and milfoil, and water-crowfoot, and such like; so it did look very big to him. Besides, he was very short-sighted, as all dragon-flies are, and never could see a yard before his nose, any more than a great many other folks, who are not half as handsome as he.

The dragon-fly did come back, and chatted away with Tom. He was a little conceited about his fine colors and his large wings; but you know he had been a poor dirty ugly creature all his life before, so there were great excuses for him. He was very fond of talking about all the wonderful things he saw in the trees and the meadows; and Tom liked to listen to him, for he had forgotten all about them. So in a little while they became great friends.

And I am very glad to say that Tom learnt such a lesson that day, that he did not torment creatures for a long time

after. And then the caddises grew quite tame, and used to tell him strange stories about the way they built their houses, and changed their skins, and turned at last into winged flies ; till Tom began to long to change his skin, and have wings like them some day.

And the trout and he made it up (for trout very soon forget, if they have been frightened and hurt). So Tom used to play with them at hare and hounds, and great fun they had ; and he used to try to leap out of the water, head over heels, as they did before a shower came on : but somehow he never could manage it. He liked most, though, to see them rising at the flies, as they sailed round and round under the shadow of the great oak, where the beetles fell flop into the water, and the green caterpillars let themselves down from the boughs by silk ropes for no reason at all ; and then changed their foolish minds for no reason at all either, and hauled themselves up again into the tree, rolling up the rope in a ball between their paws ; which is a very clever rope-dancer's trick, and neither Blondin nor Leotard could do it : but why they should take so much trouble about it no one can tell ; for they cannot get their living, as Blondin and Leotard do, by trying to break their necks on a string.

And very often Tom caught them just as they touched the water ; and caught the alder-flies, and the caperers, and the cock-tailed duns and spinners, yellow, and brown, and claret, and gray, and gave them to his friends the trout. Perhaps he was not quite kind to the flies ; but one must do a good turn to one's friends when one can.

And at last he gave up catching even the flies ; for he made acquaintance with one by accident, and found him a very merry little fellow. And this was the way it happened ; and it is all quite true :—

He was basking at the top of the water one hot day in July, catching duns and feeding the trout, when he saw a

new sort, a dark gray little fellow with a brown head. He was a very little fellow indeed ; but he made the most of himself, as people ought to do. He cocked up his head, and he cocked up his wings, and he cocked up his tail, and he cocked up the two whiskers at his tail-end, and in short, he looked the cockiest little man of all little men. And so he proved to be ; for instead of getting away, he hopped upon Tom's finger, and sat there as bold as nine tailors ; and he cried out in the tiniest, shrillest, squeakiest little voice you ever heard,—

“Much obliged to you, indeed ; but I don't want it yet.”

“Want what?” said Tom, quite taken aback by his impudence.

“Your leg, which you are kind enough to hold out for me to sit on. I must just go and see after my wife for a few minutes. Dear me ! what a troublesome business a family is !” (though the idle little rogue did nothing at all, but left his poor wife to lay all the eggs by herself). “When I come back, I shall be glad of it, if you'll be so good as to keep it sticking out just so ;” and off he flew.

Tom thought him a very cool sort of personage ; and still more so when in five minutes he came back and said,—“Ah, you were tired waiting ? Well, your other leg will do as well.”

And he popped himself down on Tom's knee, and began chatting away in his squeaking voice.

“So you live under the water ? It's a low place. I lived there for some time ; and was very shabby and dirty. But I didn't choose that that should last. So I turned respectable, and came up to the top, and put on this gray suit. It's a very business-like suit, you think, don't you ?”

“Very neat and quiet indeed,” said Tom.

“Yes, one must be quiet, and neat, and respectable,

and all that sort of thing for a little, when one becomes a family-man. But I'm tired of it, that's the truth. I've done quite enough business, I consider, in the last week, to last me my life. So I shall put on a ball dress, and go out and be a smart man, and see the gay world, and have a dance or two. Why shouldn't one be jolly if one can?"

"And what will become of your wife?"

"Oh! she is a very plain stupid creature, and that's the truth; and thinks about nothing but eggs. If she chooses to come, why she may; and if not, why I go without her; — and here I go."

And, as he spoke, he turned quite pale, and then quite white.

"Why, you're ill!" said Tom. But he did not answer.

"Your dead," said Tom, looking at him as he stood on his knee, as white as a ghost.

"No, I a'n't!" answered a little squeaking voice over his head. "This is me up here, in my ball dress: and that's my skin. Ha, ha! you could not do such a trick as that!"

And no more Tom could, nor Houdin, nor Robin, nor Frikell, nor all the conjurors in the world. For the little rogue had jumped clean out of his own skin, and left it standing on Tom's knee, eyes, wings, legs, tails, exactly as if it had been alive.

"Ha, ha!" he said, and he jerked and skipped up and down, never stopping an instant, just as if he had St. Vitus's dance. "A'n't I a pretty fellow now?"

And so he was; for his body was white, and his tail orange, and his eyes all the colors of a peacock's tail. And what was the oddest of all, the whiskers at the end of his tail had grown five times as long as they were before.

“Ah !” said he, “now I will see the gay world. My living won’t cost me much, for I have no mouth, you see, and no inside ; so I can never be hungry, nor have the stomach-ache neither.”

No more he had. He had grown as dry and hard and empty as a quill, as such silly shallow-hearted fellows deserve to grow.

But, instead of being ashamed of his emptiness, he was quite proud of it, as a good many fine gentlemen are, and began flirting and flipping up and down, and singing—

“My wife shall dance, and I shall sing,
So merrily pass the day ;
For I hold it one of the wisest things,
To drive dull care away.”

And he danced up and down for three days and three nights, till he grew so tired that he tumbled into the water, and floated down. But what became of him Tom never knew, and he himself never minded ; for Tom heard him singing to the last, as he floated down,—

“To drive dull care away-ay-ay !”

And if he did not care, why nobody else cared either.

But one day Tom had a new adventure. He was sitting on a water-lily leaf, he and his friend the dragon-fly, watching the gnats dance. The dragon-fly had eaten as many as he wanted, and was sitting quite still and sleepy, for it was very hot and bright. The gnats (who did not care the least for their poor brothers’ deaths) danced a-foot over his head quite happily, and a large black fly settled within an inch of his nose, and began washing his own face and combing his hair with his paws ; but the dragon-fly never stirred, and kept on chatting to Tom about the times when he lived under the water.

Suddenly, Tom heard the strangest noise up the stream, —cooing, and grunting, and whining, and squeaking, as if you had put into a bag two stock-doves, nine mice, three guinea-pigs, and a blind puppy, and left them there to settle themselves and make music.

He looked up the water, and there he saw a sight as strange as the noise : a great ball rolling over and over down the stream, seeming one moment of soft brown fur, and the next of shining glass ; and yet it was not a ball ; for sometimes it broke up and streamed away in pieces, and then it joined again ; and all the while the noise came out of it louder and louder.

Tom asked the dragon-fly what it could be ; but, of course, with his short sight, he could not even see it, though it was not ten yards away. So he took the neatest little header into the water, and started off to see for himself ; and, when he came near, the ball turned out to be four or five beautiful creatures, many times larger than Tom, who were swimming about, and rolling, and diving, and twisting, and wrestling, and cuddling, and kissing, and biting, and scratching, in the most charming fashion that ever was seen. And if you don't believe me, you may go to the Zoological Gardens (for I am afraid that you won't see it nearer, unless, perhaps, you get up at five in the morning, and go down to Cordery's Moor, and watch by the great withy pollard which hangs over the backwater, where the otters breed sometimes), and then say, if otters at play in the water are not the merriest, lithest, gracefulest creatures you ever saw.

But when the biggest of them saw Tom, she darted out from the rest, and cried in the water-language, sharply enough, "Quick, children ; here is something to eat, indeed !" and came at poor Tom, showing such a wicked pair of eyes, and such a set of sharp teeth in a grinning mouth, that Tom who had thought her very handsome,

said to himself, Handsome is that handsome does, and slipped in between the water-lily roots as fast as he could, and then turned round and made faces at her.

"Come out," said the wicked old otter, "or it will be worse for you."

But Tom looked at her from between two thick roots, and shook them with all his might, making horrible faces all the while, just as he used to grin through the railings at the old women, when he lived before. It was not quite well-bred, no doubt; but you know, Tom had not finished his education yet.

"Come away, children," said the otter in disgust; "it is not worth eating, after all. It is only a nasty eft, which nothing eats, not even those vulgar pike in the pond."

"I am not an eft!" said Tom. "Efts have tails."

"You are an eft," said the otter, very positively. "I see your two hands quite plain, and I know you have a tail."

"I tell you I have not," said Tom. "Look here!" and he turned his pretty little self quite round; and, sure enough, he had no more tail than you.

The otter might have got out of it by saying that Tom was a frog; but, like a great many other people, when she had once said a thing, she stood to it, right or wrong; so she answered:

"I say you are an eft, and therefore you are, and not fit food for gentlefolk like me and my children. You may stay there till the salmon eat you;" (she knew the salmon would not, but she wanted to frighten poor Tom).

"Ha, ha! they will eat you, and we will eat them!" and the otter laughed such a wicked cruel laugh—as you may hear them do sometimes; and the first time that you hear it you will probably think it is bogies.

"What are salmon?" asked Tom.

"Fish, you eft!—great fish, nice fish to eat. They are

the lords of the fish, and we are the lords of the salmon ;” and she laughed again. “We hunt them up and down the pools, and drive them up into a corner, the silly things ; they are so proud, and bully the little trout, and the minnows, till they see us coming, and then they are so meek all at once ; and we catch them, but we disdain to eat them all ; we just bite out their soft throats and suck their sweet juice—Oh, so good !”—(and she licked her wicked lips)—“and then throw them away, and go and catch another. They are coming soon, children, coming soon : I can smell the rain coming up off the sea ; and then hurrah for a fresh, soft salmon, and plenty of eating all day long !”

And the otter grew so proud that she turned head over heels twice, and then stood upright half out of the water, grinning like a Cheshire cat.

“And where do they come from ?” asked Tom, who kept himself very close, for he was considerably frightened.

“Out of the sea, eft, the great wide sea, where they might stay and be safe if they liked. But out of the sea the silly things come, into the great river down below, and we come up to watch for them ; and when they go down again we go down and follow them. And there we fish for the bass and the pollock, and have jolly days along the shore, and toss and roll in the breakers, and sleep snug in the warm dry crags. Ah, that is a merry life too, children, if it were not for those horrid men.”

“What are men ?” asked Tom ; but somehow he seemed to know before he asked.

“Two-legged things, eft : and, now I come to look at you, they are actually something like you, if you had not a tail,” (she was determined that Tom should have a tail,) “only a great deal bigger, worse luck for us ! and they catch the fish with hooks and lines, which get into our feet sometimes, and set pots along the rocks to catch lob-

sters. They speared my poor dear husband as he went out to find something for me to eat. I was laid up among the crags then, and we were very low in the world, for the sea was so rough that no fish would come in shore. But they speared him, poor fellow ! and I saw them carrying him away upon a pole. Ah, he lost his life for your sakes, my children, poor dear obedient creature that he was."

And the otter grew so sentimental (for otters can be very sentimental when they choose, like a good many people who are both cruel and greedy, and no good to anybody at all) that she sailed solemnly away down the burn, and Tom saw her no more for that time. And lucky it was for her that she did so ; for no sooner was she gone, than down the bank came seven little rough terrier dogs, snuffing and yapping, and grubbing and splashing, in full cry after the otter. Tom hid among the water-lilies till they were gone ; for he could not guess that they were the water-fairies come to help him.

But *He* could not help thinking of what the otter had said about the great river and the broad sea. And, as he thought, he longed to go and see them. He could not tell why ; but the more he thought, the more he grew discontented with the narrow little stream in which he lived, and all his companions there ; and wanted to get out into the wide wide world, and enjoy all the wonderful sights of which he was sure it was full.

And once he set off to go down the stream. But the stream was very low ; and when he came to the shallows he could not keep under water, for there was no water left to keep under. So the sun burnt his back and made him sick ; and he went back again and lay quiet in the pool for a whole week more.

And then, on the evening of a very hot day, he saw a sight.

He had been very stupid all day, and so had the trout; for they would not move an inch to take a fly, though there were thousands on the water, but lay dozing at the bottom under the shade of the stone; and Tom lay dozing too, and was glad to cuddle their smooth cool sides, for the water was quite warm and unpleasant.

But toward evening it grew suddenly dark, and Tom looked up and saw a blanket of black clouds lying right across the valley above his head, resting on the crags right and left. He felt not quite frightened, but very still; for everything was still. There was not a whisper of wind, nor a chirp of a bird to be heard; and next a few great drops of rain fell plop into the water, and one hit Tom on the nose and made him pop his head down quickly enough.

And then the thunder roared, and the lightning flashed, and leapt across Vendale and back again, from cloud to cloud, and cliff to cliff, till the very rocks in the stream seemed to shake: and Tom looked up at it through the water, and thought it the finest thing he ever saw in his life.

But out of the water he dared not put his head; for the rain came down by bucketsful, and the hail hammered like shot on the stream, and churned it into foam; and soon the stream rose, and rushed down, higher and higher, and fouler and fouler, full of beetles, and sticks, and straws, and worms, and addle-eggs, and wood-lice, and leeches, and odds and ends, and omnium-gatherums, and this, that, and the other, enough to fill nine museums.

Tom could hardly stand against the stream, and hid behind a rock. But the trout did not; for out they rushed from among the stones, and began gobbling the beetles and leeches in the most greedy and quarrelsome way, and swimming about with great worms hanging out of their mouths, tugging and kicking to get them away from each other.

And now, by the flashes of the lightning, Tom saw a new sight,—all the bottom of the stream alive with great eels, turning and twisting along, all down-stream and away. They had been hiding for weeks past in the cracks of the rocks, and in burrows in the mud; and Tom had hardly ever seen them, except now and then at night: but now they were all out, and went hurrying past him so fiercely and wildly that he was quite frightened. And as they hurried past he could hear them say to each other, “We must run, we must run. What a jolly thunder-storm! Down to the sea, down to the sea!”

And then the otter came by with all her brood, twining and sweeping along as fast as the eels themselves; and she spied Tom as she came by, and said,—

“Now is your time, eft, if you want to see the world. Come along, children; never mind those nasty eels: we shall breakfast on salmon to-morrow. Down to the sea, down to the sea!”

Then came a flash brighter than all the rest, and by the light of it—in the thousandth part of a second they were gone again; but he had seen them, he was certain of it—three beautiful little white girls, with their arms twined round each other’s necks, floating down the torrent, as they sang, “Down to the sea, down to the sea!”

“Oh, stay! Wait for me!” cried Tom; but they were gone: yet he could hear their voices clear and sweet through the roar of thunder and water and wind, singing as they died away, “Down to the sea!”

“Down to the sea?” said Tom; “everything is going to the sea; and I will go too. Good-bye, trout.” But the trout were so busy gobbling worms that they never turned to answer him; so that Tom was spared the pain of bidding them farewell.

And now, down the rushing stream, guided by the bright flashes of the storm; past tall birch-fringed rocks,

which shone out one moment as clear as day, and the next were dark as night; past dark hovers under swirling banks, from which great trout rushed out on Tom, thinking him to be good to eat, and turned back sulkily, for the fairies sent them home again with a tremendous scolding for daring to meddle with a water-baby; on through narrow strids and roaring cataracts, where Tom was deafened and blinded for a moment by the rushing waters; along deep reaches, where the white water-lilies tossed and flapped beneath the wind and hail; past sleeping villages; under dark bridge-arches, and away and away to the sea. And Tom could not stop, and did not care to stop: he would see the great world below, and the salmon, and the breakers, and the wide, wide sea.

And when the daylight came, Tom found himself out in the salmon river.

And what sort of a river was it? Was it like an Irish stream, winding through the brown bogs, where the wild ducks squatter up from among the white water-lilies, and the curlews flit to and fro crying "Tullie-wheep, mind your sheep"; and Dennis tells you strange stories of the Peishtamore, the great boggy-snake which lies in the black peat pools, among the old pine-stems, and puts his head out at night to snap at the cattle as they come down to drink?—But you must not believe all that Dennis tells you, mind; for if you ask him,—

"Is there a salmon here, do you think, Dennis?"

"Is it salmon, thin, your honor manes? Salmon? Cartloads it is of thim, thin, an' ridgmens, shouldthering ache other out of wather, av' ye'd but the luck to see thim."

Then you fish the pool all over, and never get a rise.

"But there can't be a salmon here, Dennis! and, if

you'll but think, if one had come up last tide, he'd be gone to the higher pools by now."

"Shure thin, and your honor's the throe fisherman, and understands it all like a book. Why, ye spake as if ye'd known the wather a thousand years! As I said, how could there be a fish here at all, just now?"

"But you said just now they were shouldering each other out of water?"

And then Dennis will look up at you with his handsome, sly, soft, sleepy, good-natured, untrustable, Irish gray eye, and answer with the prettiest smile:

"Shure, and didn't I think your honor would like a pleasant answer?"

So you must not trust Dennis, because he is in the habit of giving pleasant answers; but, instead of being angry with him, you must remember that he is a poor Paddy, and knows no better; so you must just burst out laughing; and then he will burst out laughing too, and slave for you, and trot about after you, and show you good sport, if he can,—for he is an affectionate fellow, and as fond of sport as you are,—and if he can't, tell you fibs instead, a hundred an hour; and wonder all the while why poor ould Ireland does not prosper like England and Scotland, and some other places, where folk have taken up a ridiculous fancy that honesty is the best policy.

Or was it like a Welsh salmon river, which is remarkable chiefly (at least, till this last year) for containing no salmon, as they have been all poached out by the enlightened peasantry, to prevent the Cythrawl Sassenach (which means you, my little dear, your kith and kin, and signifies much the same as the Chinese Fan Quei) from coming bothering into Wales, with good tackle, and ready money, and civilization, and common honesty, and other like things of which the Cymry stand in no need whatsoever?

Or was it such a salmon stream as I trust you will see

among the Hampshire water-meadows before your hairs are gray, under the wise new fishing-laws?—when Winchester apprentices shall covenant, as they did three hundred years ago, not to be made to eat salmon more than three days a week ; and fresh-run fish shall be as plentiful under Salisbury spire as they are in Hollyhole at Christchurch ; in the good time coming, when folks shall see that, of all Heaven's gifts of food, the one to be protected most carefully is that worthy gentleman Salmon, who is generous enough to go down to the sea weighing five ounces, and to come back next year weighing five pounds, without having cost the soil or the state one farthing ?

Or was it like a Scotch stream, such as Arthur Clough drew in his “ Bothie ” :—

“ Where over a ledge of granite

Into a granite bason the amber torrent descended. . . .

Beautiful there for the color derived from green rocks under ;

Beautiful most of all, where beads of foam uprising

Mingle their clouds of white with the delicate hue of the stillness. . .

Cliff over cliff for its sides, with rowan and pendant birch-boughs.”

Ah, my little man, when you are a big man, and fish such a stream as that, you will hardly care, I think, whether she be roaring down in full spate, like coffee covered with scald cream, while the fish are swirling at your fly as an oar-blade swirls in a boat-race, or flashing up the cataract like silver arrows, out of the fiercest of the foam ; or whether the fall be dwindled to a single thread, and the shingle below be as white and dusty as a turnpike road, while the salmon huddle together in one dark cloud in the clear amber pool, sleeping away their time till the rain creeps back again off the sea. You will not care much, if you have eyes and brains ; for you will lay down your rod contentedly, and drink in at your eyes the beauty of that glorious place ; and listen to the water-ouzel piping on the stones, and watch the yellow roes come down to drink, and look up at you with their great soft trustful

eyes, as much as to say, "You could not have the heart to shoot at us?" And then, if you have sense, you will turn and talk to the great giant of a gilly who lies basking on the stone beside you. He will tell you no fibs, my little man; for he is a Scotchman, and fears God, and not the priest; and, as you talk with him, you will be surprised more and more at his knowledge, his sense, his humor, his courtesy; and you will find out—unless you have found it out before—that a man may learn from his Bible to be a more thorough gentleman than if he had been brought up in all the drawing-rooms in London.

No. It was none of these, the salmon stream at Harth-over. It was such a stream as you see in dear old Bewick; Bewick, who was born and bred upon them. A full hundred yards broad it was, sliding on from broad pool to broad shallow, and broad shallow to broad pool, over great fields of shingle, under oak and ash coverts, past low cliffs of sandstone, past green meadows, and fair parks, and a great house of gray stone, and brown moors above, and here and there against the sky the smoking chimney of a colliery. You must look at Bewick to see just what it was like, for he has drawn it a hundred times with the care and the love of a true north countryman; and, even if you do not care about the salmon river, you ought, like all good boys, to know your Bewick.

At least, so old Sir John used to say; and very sensibly he put it too, as he was wont to do,—

"If they want to describe a finished young gentleman in France, I hear, they say of him, '*Il sait son Rabelais*.' But if I want to describe one in England, I say, 'He knows his Bewick.' And I think that is the higher compliment."

But Tom thought nothing about what the river was like. All his fancy was, to get down to the wide wide sea.

And after a while he came to a place where the river spread out into broad still shallow reaches, so wide that little Tom, as he put his head out of the water, could hardly see across.

And there he stopped. He got a little frightened. "This must be the sea," he thought. "What a wide place it is. If I go on into it I shall surely lose my way, or some strange thing will bite me. I will stop here and look out for the otter, or the eels, or some one to tell me where I shall go."

So he went back a little way, and crept into a crack of the rock, just where the river opened out into the wide shallows, and watched for some one to tell him his way; but the otter and the eels were gone on miles and miles down the stream.

There he waited, and slept too, for he was quite tired with his night's journey, and when he woke, the stream was clearing to a beautiful amber hue, though it was still very high. And after a while he saw a sight which made him jump up; for he knew in a moment it was one of the things which he had come to look for.

Such a fish! ten times as big as the biggest trout, and a hundred times as big as Tom, sculling up the stream past him, as easily as Tom had sculled down.

Such a fish! shining silver from head to tail, and here and there a crimson dot; with a grand hooked nose, and grand curling lip, and a grand bright eye, looking round him as proudly as a king, and surveying the water right and left as if it all belonged to him. Surely he must be the salmon, the king of all the fish.

Tom was so frightened that he longed to creep into a hole; but he need not have been; for salmon are all true gentlemen, and, like true gentlemen, they look noble and proud enough, and yet, like true gentlemen, they never harm or quarrel with any one, but go about

their own business, and leave rude fellows to themselves.

The salmon looked him full in the face, and then went on without minding him, with a switch or two of his tail which made the stream boil again. And in a few minutes came another, and then four or five, and so on ; and all passed Tom, rushing and plunging up the cataract with strong strokes of their silver tails, now and then leaping clean out of water and up over a rock, shining gloriously for a moment in the bright sun ; while Tom was so delighted that he could have watched them all day long.

And at last one came up, bigger than all the rest ; but he came slowly, and stopped, and looked back, and seemed very anxious and busy. And Tom saw that he was helping another salmon, an especially handsome one, who had not a single spot upon it, but was clothed in pure silver from nose to tail.

"My dear," said the great fish to his companion, "you really look dreadfully tired, and you must not over-exert yourself at first. Do rest yourself behind this rock ;" and he shoved her gently with his nose to the rock where Tom sat.

You must know that this was the salmon's wife. For salmon, like other true gentlemen, always choose their lady, and love her, and are true to her, and take care of her, and work for her, and fight for her, as every true gentlemen ought ; and are not like vulgar chub and roach and pike, who have no high feelings, and take no care of their wives.

Then he saw Tom, and looked at him very fiercely one moment, as if he was going to bite him.

"What do you want here ?" he said, very fiercely.

"Oh, don't hurt me !" cried Tom. "I only want to look at you ; you are so handsome."

"Ah ?" said the salmon, very stately but very civilly. "I really beg your pardon ; I see what you are, my little

dear. I have met one or two creatures like you before, and found them very agreeable and well-behaved. Indeed, one of them showed me a great kindness lately, which I hope to be able to repay. I hope we shall not be in your way here. As soon as this lady is rested, we shall proceed on our journey."

What a well-bred old salmon he was !

"So you have seen things like me before?" asked Tom.

"Several times, my dear. Indeed, it was only last night that one at the river's mouth came and warned me and my wife of some new stake-nets which had got into the stream, I cannot tell how, since last winter, and showed us the way round them in the most charmingly obliging way."

"So there are babies in the sea?" cried Tom, and clapped his little hands. "Then I shall have some one to play with there? How delightful!"

"Were there no babies up this stream?" asked the lady salmon.

"No; and I grew so lonely. I thought I saw three last night: but they were gone in an instant, down to the sea. So I went too; for I had nothing to play with but caddises and dragon-flies and trout."

"Ugh!" cried the lady, "what low company!"

"My dear, if he has been in low company, he has certainly not learnt their low manners," said the salmon.

"No, indeed, poor little dear! but how sad for him to live among such people as caddises, who have actually six legs, the nasty things! and dragon-flies too! Why they are not even good to eat; for I tried them once, and they are all hard and empty; and, as for trout, every one knows what they are." Whereon she curled up her lip, and looked dreadfully scornful, while her husband curled up his too, till he looked as proud as Alcibiades.

"Why do you dislike the trout so?" asked Tom.

My dear, we do not even mention them, if we can help it; for I am sorry to say they are relations of ours who do us no credit. A great many years ago they were just like us; but they were so lazy, and cowardly, and greedy, that instead of going down to the sea every year to see the world and grow strong and fat, they chose to stay and poke about in the little streams and eat worms and grubs: and they are very properly punished for it; for they have grown ugly and brown and spotted and small; and are actually so degraded in their tastes, that they will eat our children."

"And then they pretend to scrape acquaintance with us again," said the lady. "Why, I have actually known one of them propose to a lady salmon, the little impudent creature!"

"I should hope," said the gentleman, "that there are very few ladies of our race who would degrade themselves by listening to such a creature for an instant. If I saw such a thing happen, I should consider it my duty to put them both to death upon the spot." So the old salmon said, like an old blue-blooded hidalgo of Spain; and what is more, he would have done it too. For you must know, no enemies are so bitter against each other as those who are of the same race; and a salmon looks on a trout as some great folks look on some little folks,—as something just too much like himself to be tolerated.

CHAPTER IV.

SWEET is the lore which Nature brings ;
Our meddling intellect
Misshapes the beauteous forms of things
We murder to dissect.

“ Enough of science and of art :
Close up these barren leaves ;
Come forth, and bring with you a heart
That watches and receives.”

WORDSWORTH.

So the salmon went up, after Tom had warned them of the wicked old otter ; and Tom went down, but slowly and cautiously, coasting along the shore. He was many days about it, for it was many miles down to the sea ; and perhaps he would never have found his way, if the fairies had not guided him, without his seeing their fair faces, or feeling their gentle hands.

And, as he went, he had a very strange adventure. It was a clear still September night, and the moon shone so brightly down through the water, that he could not sleep, though he shut his eyes as tight as possible. So at last he came up to the top, and sat upon a little point of rock, and looked up at the broad yellow moon, and wondered what she was, and thought that she looked at him. And he watched the moonlight on the rippling river, and the black heads of the firs, and the silver-frosted lawns, and listened to the owl's hoot, and the snipe's bleat, and the fox's bark, and the otter's laugh ; and smelt the soft perfume of the birches, and the wafts of heather honey off the grouse-moor far above ; and felt very happy, though he could not well tell why. You, of course, would have

been very cold sitting there on a September night, without the least bit of clothes on your wet back ; but Tom was a water-baby, and therefore felt cold no more than a fish.

Suddenly, he saw a beautiful sight. A bright red light moved along the river-side, and threw down into the water a long tap-root of flame. Tom, curious little rogue that he was, must needs go and see what it was ; so he swam to the shore, and met the light as it stopped over a shallow run at the edge of a low rock.

And there, underneath the light, lay five or six great salmon, looking up at the flame with their great goggle eyes, and wagging their tails, as if they were very much pleased at it.

Tom came to the top, to look at this wonderful light nearer, and made a splash.

And he heard a voice say,—

“ There was a fish rose.

He did not know what the words meant ; but he seemed to know the sound of them, and to know the voice which spoke them ; and he saw on the bank three great two-legged creatures, one of whom held the light, flaring and sputtering, and another a long pole. And he knew that they were men, and was frightened, and crept into a hole in the rock, from which he could see what went on.

The man with the torch bent down over the water, and looked earnestly in ; and then he said,—

“ Tak that muckle fellow, lad ; he’s ower fifteen punds ; and haud your hand steady.”

Tom felt that there was some danger coming, and longed to warn the foolish salmon, who kept staring up at the light as if he was bewitched. But, before he could make up his mind, down came the pole through the water ; there was a fearful splash and struggle, and Tom

saw that the poor salmon was speared right through, and was lifted out of the water.

And then, from behind, there sprung on these three men three other men ; and there were shouts, and blows, and words which Tom recollected to have heard before ; and he shuddered and turned sick at them now, for he felt somehow that they were strange, and ugly, and wrong, and horrible. And it all began to come back to him. They were men ; and they were fighting ; savage, desperate, up-and-down fighting, such as Tom had seen too many times before.

And he stopped his little ears, and longed to swim away ; and was very glad that he was a water-baby, and had nothing to do any more with horrid dirty men, with foul clothes on their backs, and foul words on their lips : but he dared not stir out of his hole ; while the rock shook over his head with the trampling and struggling of the keepers and the poachers.

All of a sudden there was a tremendous splash, and a frightful flash, and a hissing, and all was still.

For into the water, close to Tom, fell one of the men ; he who held the light in his hand. Into the swift river he sank, and rolled over and over in the current. Tom heard the men above run along, seemingly looking for him ; but he drifted down into the deep hole below, and there lay quite still, and they could not find him.

Tom waited a long time, till all was quiet ; and then he peeped out, and saw the man lying. At last he screwed up his courage, and swam down to him. " Perhaps," he thought, " the water has made him fall asleep, as it did me."

Then he went nearer. He grew more and more curious, he could not tell why. He must go and look at him. He would go very quietly, of course ; so he swam round and round him, closer and closer ; and, as he did not stir, at

last he came quite close and looked him in the face.

The moon shone so bright that Tom could see every feature; and, as he saw, he recollected, bit by bit. It was his old master, Grimes.

Tom turned tail, and swam away as fast as he could.

“Oh, dear me!” he thought, “now he will turn into a water-baby. What a nasty troublesome one he will be! And perhaps he will find me out, and beat me again.”

So he went up the river again a little way, and lay there the rest of the night under an alder-root; but when morning came, he longed to go down again to the big pool, and see whether Mr. Grimes had turned into a water-baby yet.

So he went very carefully, peeping round all the rocks, and hiding under all the roots. Mr. Grimes lay there still; he had not turned into a water-baby. In the afternoon Tom went back again. He could not rest till he had found out what had become of Mr. Grimes. But this time Mr. Grimes was gone; and Tom made up his mind that he was turned into a water-baby.

He might have made himself easy, poor little man; Mr. Grimes did not turn into a water-baby, or anything like one at all. But he did not make himself easy; and a long time he was fearful lest he should meet Grimes suddenly in some deep pool. He could not know that the fairies had carried him away, and put him, where they put everything which falls into the water, exactly where it ought to be. But, do you know, what had happened to Mr. Grimes had such an effect on him, that he never poached salmon any more. And it is quite certain that, when a man becomes a confirmed poacher, the only way to cure him is to put him under water for twenty-four hours, like Grimes. So, when you grow to be a big man, do you behave as all honest fellows should; and never touch a fish or a head of a game which belongs to

another man without his express leave ; and then people will call you a gentleman, and treat you like one ; and perhaps give you good sport ; instead of hitting you into the river, or calling you a poaching snob.

Then Tom went on down, for he was afraid of staying near Grimes ; and as he went, all the vale looked sad. The red and yellow leaves showered down into the river ; the flies and beetles were all dead and gone ; the chill autumn fog lay low upon the hills, and sometimes spread itself so thickly on the river that he could not see his way. But he felt his way instead, following the flow of the stream, day after day, past great bridges, past boats and barges, past the great town, with its wharfs, and mills, and tall smoking chimneys, and ships which rode at anchor in the stream ; and now and then he ran against their hawsers, and wondered what they were, and peeped out, and saw the sailors lounging on board, smoking their pipes ; and ducked under again, for he was terribly afraid of being caught by man and turned into a chimney-sweep once more. He did not know that the fairies were close to him always, shutting the sailors' eyes lest they should see him and turning him aside from mill-races, and sewer mouths, and all foul and dangerous things. Poor little fellow, it was a dreary journey for him ; and more than once he longed to be back in Vendale, playing with the trout in the bright summer sun. But it could not be. What has been once can never come over again. And people can be little babies, even water-babies, only once in their lives.

Besides, people who make up their minds to go and see the world, as Tom did, must needs find it a weary journey. Lucky for them if they do not lose heart and stop half-way, instead of going on bravely to the end as Tom did. For then they will remain neither boys nor men, neither fish, flesh, nor good red herring ; having

learnt a great deal too much, and yet not enough ; and sown their wild oats, without having the advantage of reaping them.

But Tom was always a brave, determined little English bull-dog, who never knew when he was beaten ; and on and on he held, till he saw a long way off the red buoy through the fog. And then he found, to his surprise, the stream turned round, and running up inland.

It was the tide, of course ; but Tom knew nothing of the tide. He only knew that in a minute more the water, which had been fresh, turned salt all round him. And then there came a change over him. He felt as strong and light and fresh, as if his veins had run champagne ; and gave, he did not know why, three skips out of the water, a yard high, and head over heels, just as the salmon do when they first touch the noble rich salt water, which, as some wise men tell us, is the mother of all living things.

He did not care now for the tide being against him. The red buoy was in sight, dancing in the open sea ; and to the buoy he would go ; and to it he went. He passed great shoals of bass and mullet, leaping and rushing in after the shrimps, but he never heeded them, or they him ; and once he passed a great black shining seal, who was coming in after the mullet. The seal put his head and shoulders out of water, and stared at him, looking exactly like a fat old greasy negro with a gray pate. And Tom, instead of being frightened, said, "How d'ye do, sir ; what a beautiful place the sea is !" And the old seal, instead of trying to bit him, looked at him with his soft sleepy winking eyes, and said, "Good tide to you, my little man ; are you looking for your brothers and sisters ? I passed them all at play outside."

"Oh, then," said Tom, "I shall have playfellows at last !" and he swam on to the buoy, and got upon it (for

he was quite out of breath) and sat there, and looked round for water-babies : but there were none to be seen.

The sea-breeze came in freshly with the tide, and blew the fog away ; and the little waves danced for joy around the buoy, and the old buoy danced with them. The shadows of the clouds ran races over the bright blue bay, and yet never caught each other up ; and the breakers plunged merrily upon the wide white sands, and jumped over the rocks, to see what the green fields inside were like, and tumbled down and broke themselves all to pieces, and never minded it a bit, but mended themselves and jumped up again. And the terns hovered over Tom like huge white dragon-flies with black heads ; and the gulls laughed like girls at play ; and the sea-pies, with their red bills and legs, flew to and fro from shore to shore, and whistled sweet and wild. And Tom looked and looked, and listened ; and he would have been very happy, if he could only have seen the water-babies. Then, when the tide turned, he left the buoy, and swam round and round in search of them : but in vain. Sometimes he thought he heard them laughing : but it was only the laughter of the ripples. And sometimes he thought he saw them at the bottom : but it was only white and pink shells. And once he was sure he had found one, for he saw two bright eyes peeping out of the sand. So he dived down, and began scraping the sand away, and cried, "Don't hide ; I do want some one to play with so much !" And out jumped a great turbot, with his ugly eyes and mouth all awry, and flopped away along the bottom, knocking poor Tom over. And he sat down at the bottom of the sea, and cried salt tears from sheer disappointment.

To have come all this way, and faced so many dangers, and yet to find no water-babies ! How hard ! Well, it did seem hard : but people, even little babies, cannot have

all they want without waiting for it, and working for it too, my little man, as you will find out some day.

And Tom sat upon the buoy long days, long weeks, looking out to sea, and wondering when the water-babies would come back; and yet they never came.

Then he began to ask all the strange things which came in out of the sea if they had seen any; and some said "Yes," and some said nothing at all.

He asked the bass and the pollock; but they were so greedy after the shrimps that they did not care to answer him a word.

Then there came in a whole fleet of purple sea-snails, floating along each on a sponge full of foam, and Tom said, "Where do you come from, you pretty creatures? and have you seen the water-babies?"

And the sea-snails answered, "Whence we come we know not; and whither we are going, who can tell? We float out our little life in the mid-ocean, with the warm sunshine above our heads, and the warm gulf stream below; and that is enough for us. Yes, perhaps we have seen the water-babies. We have seen many strange things as we sailed along." And they floated away, the happy stupid things, and all went ashore upon the sands.

Then there came in a great lazy sunfish, as big as a fat pig cut in half; and he seemed to have been cut in half too, and squeezed in a clothes-press till he was flat; but to all his big body and big fins he had only a little rabbit's mouth no bigger than Tom's; and, when Tom questioned him, he answered in a little squeaky, feeble voice,—

"I'm sure I don't know; I've lost my way. I meant to go to the Chesapeake, and I'm afraid I've got wrong, somehow. Dear me! it was all by following that pleasant warm water. I'm sure I've lost my way."

And, when Tom asked him again, he could only answer, "I've lost my way. Don't talk to me; I want to think."

But, like a good many other people, the more he tried to think the less he could think ; and Tom saw him blundering about all day, till the coast-guardsmen saw his big fin above the water, and rowed out, and struck a boat-hook into him, and took him away. They took him up to the town and showed him for a penny a head, and made a good day's work of it. But of course Tom did not know that.

Then there came by a shoal of porpoises, rolling as they went,—papas, and mammas, and little children,—and all quite smooth and shiny, because the fairies French-polish them every morning ; and they sighed so softly as they came by, that Tom took courage to speak to them : but all they answered was, “Hush, hush, hush !” for that was all they had learnt to say.

And then there came a shoal of basking sharks, some of them as long as a boat, and Tom was frightened at them. But they were very lazy, good-natured fellows, not greedy tyrants, like white sharks and blue sharks and ground-sharks and hammer-heads, who eat men,—or saw-fish and threshers and ice-sharks, who hunt the poor old whales. They came and rubbed their great sides against the buoy, and lay basking in the sun with their back-fins out of water ; and winked at Tom : but he never could get them to speak. They had eaten so many herrings that they were quite stupid ; and Tom was glad when a collier brig came by, and frightened them all away ; for they did smell most horribly, certainly, and he had to hold his nose tight as long as they were there.

And then there came by a beautiful creature, like a ribbon of pure silver, with a sharp head and very long teeth ; but it seemed very sick and sad. Sometimes it rolled helpless on its sides ; and then dashed away, glittering like white fire ; and then it lay sick again and motionless.

“Where do you come from?” asked Tom. “And why are you so sick and sad?”

“I come from the warm Carolinas, and the sand-banks fringed with pines, where the great owl-rays leap and flap, like giant bats, upon the tide. But I wandered north and north, upon the treacherous warm gulf stream, till I met with the cold icebergs, afloat in the mid-ocean. So I got tangled among the icebergs, and chilled with their frozen breath. But the water-babies helped me from among them, and set me free again. And now I am mending every day; but I am very sick and sad; and perhaps I shall never get home again to play with the owl-rays any more.”

“Oh!” cried Tom. “And you have seen water babies? Have you seen any near here?”

“Yes; they helped me again last night, or I should have been eaten by a great black porpoise.”

How vexatious! The water-babies close to him, and yet he could not find one.

And then he left the buoy, and used to go along the sands and round the rocks, and come out in the night,—like the forsaken Merman in Mr. Arnold’s beautiful poem, which you must learn by heart some day,—and sit upon a point of rock, among the shining sea-weeds, in the low October tides, and cry and call for the water-babies: but he never heard a voice call in return. And, at last, with his fretting and crying, he grew quite lean and thin.

But one day among the rocks he found a playfellow. It was not a water-baby, alas! but it was a lobster; and a very distinguished lobster he was; for he had live barnacles on his claws, which is a great mark of distinction in lobsterdom, and no more to be bought for money than a good conscience or the Victoria Cross.

Tom had never seen a lobster before; and he was mightily taken with this one; for he thought him the most curious, odd, ridiculous creature he had ever seen;

and there he was not far wrong ; for all the ingenious men, and all the scientific men, and all the fanciful men, in the world, with all the old German boggy-painters into the bargain, could never invent, if all their wits were boiled into one, anything so curious, and so ridiculous, as a lobster.

He had one claw knobbed and the other jagged ; and Tom delighted in watching him hold on to the sea-weed with his knobbed claw, while he cut up salads with his jagged one, and then put them into his mouth, after smelling at them, like a monkey. And always the little barnacles threw out their casting nets and swept the water, and came in for their share of whatever there was for dinner.

But Tom was most astonished to see how he fired himself off—snap ! like the leap-frogs which you make out of a goose's breast-bone. Certainly he took the most wonderful shots, and backwards too. For, if he wanted to go into a narrow crack ten yards off, what do you think he did? If he had gone in head foremost, of course he could not have turned round. So he used to turn his tail to it, and lay his long horns, which carry his sixth sense in their tips (and nobody knows what that sixth sense is), straight down his back to guide him, and twist his eyes back till they almost came out of their sockets, and then made ready, present, fire, snap !—and away he went, pop into the hole ; and peeped out and twiddled his whiskers, as much as to say, "You couldn't do that."

Tom asked him about water-babies. "Yes," he said. He had seen them often. But he did not think much of them. They were meddlesome little creatures, that went about helping fish and shells which got into scrapes. Well, for his part, he should be ashamed to be helped by little soft creatures that had not even a shell on their backs. He had lived quite long enough in the world to take care of himself.

He was a conceited fellow, the old lobster, and not very civil to Tom ; and you will hear how he had to alter his mind before he was done, as conceited people generally have. But he was so funny, and Tom so lonely, that he could not quarrel with him ; and they used to sit in holes in the rocks, and chat for hours.

And about this time there happened to Tom a very strange and important adventure—so important, indeed, that he was very near never finding the water-babies at all ; and I am sure you would have been sorry for that.

I hope that you have not forgotten the little white lady all this while. At least, here she comes, looking like a clean white good little darling, as she always was, and always will be. For it befell in the pleasant short December days, when the wind always blows from the southwest, till Old Father Christmas comes and spreads the great white table-cloth, ready for little boys and girls to give the birds their Christmas dinner of crumbs,—it befell (to go on) in the pleasant December days, that Sir John was so busy hunting that nobody at home could get a word out of him. Four days a week he hunted, and very good sport he had ; and the other two he went to the bench and the board of guardians, and very good justice he did ; and, when he got home in time, he dined at five ; for he hated this absurd new fashion of dining at eight in the hunting-season, which forces a man to make interest with the footman for cold beef and beer as soon as he comes in, and so spoil his appetite, and then sleep in an arm-chair in his bedroom, all stiff and tired, for two or three hours before he can get his dinner like a gentleman. And do you be like Sir John, my dear little man, when you are your own master ; and, if you want either to read hard or ride hard, stick to the good old Cambridge hours of breakfast at eight and dinner at five, by which you may get two days' work out of one. But, of course, if

you find a fox at three in the afternoon and run him till dark, and leave off twenty miles from home, why you must wait for your dinner till you can get it, as better men than you have done. Only see that, if you go hungry, your horse does not; but give him his warm gruel and beer, and take him gently home, remembering that good horses don't grow on the hedge like blackberries.

It befell (to go on a second time) that Sir John, hunting all day and dining at five, fell asleep every evening, and snored so terribly that all the windows in Harthover shook, and the soot fell down the chimneys. Whereon My Lady, being no more able to get conversation out of him than a song out of a dead nightingale, determined to go off and leave him, and the doctor, and Captain Swinger the agent, to snore in concert every evening to their hearts' content. So she started for the sea-side with all the children, in order to put herself and them into condition by mild applications of iodine. She might as well have stayed at home and used Parry's liquid horse-blister, for there was plenty of it in the stables; and then she would have saved her money, and saved the chance, also, of making all the children ill instead of well (as hundreds are made) by taking them to some nasty-smelling undrained lodging, and then wondering how they caught scarlatina and diphtheria: but people won't be wise enough to understand that till they are all dead of bad smells, and then it will be too late; besides, you see, Sir John did certainly snore very loud.

But where she went to nobody must know, for fear young ladies should begin to fancy that there are water-babies there; and so hunt and hawk after them, (besides raising the price of lodgings,) and keep them in aquariums, as the ladies at Pompeii (as you may see by the paintings) used to keep Cupids in cages. But nobody

ever heard that they starved the Cupids, or let them die of dirt and neglect, as English young ladies do by the poor sea-beasts. So nobody must know where My Lady went. Letting water babies die is as bad as taking singing-birds' eggs ; for, though there are thousands, ay, millions, of both of them in the world, yet there is not one too many.

Now it befell that, on the very shore, and over the very rocks, where Tom was sitting with his friend the lobster, there walked one day the little white lady, Ellie herself, and with her a very wise man indeed—Professor Pthmlnsprts.

His mother was a Dutchwoman, and therefore he was born at Curaçao (of course you have learnt your geography, and therefore know why) ; and his father a Pole, and therefore he was brought up at Petropaulowski (of course you have learnt your modern politics, and therefore know why) : but for all that he was as thorough an Englishman as ever coveted his neighbor's goods. And his name, as I said, was Professor Pthmlnsprts, which is a very ancient and noble Polish name.

He was, as I said, a very great naturalist, and chief professor of Necrobioneopalæonhydrochthonanthropopithekology in the new university which the king of the Cannibal Islands had founded ; and, being a member of the Acclimatization Society, he had come here to collect all the nasty things which he could find on the coast of England, and turn them loose round the Cannibal Islands, because they had not nasty things enough there to eat what they left.

But he was a very worthy kind good-natured little old gentleman ; and very fond of children (for he was not the least a cannibal himself) ; and very good to all the world as long as it was good to him. Only one fault he had, which cock-robins have likewise, as you may see if you

will look out of the nursery window—that, when any one else found a curious worm, he would hop round them, and peck them, and set up his tail, and bristle up his feathers, just as a cock-robin would ; and declare that he found the worm first ; and that it was his worm : and, if not, that then it was not a worm at all.

He had met Sir John at Scarborough, or Fleetwood, or somewhere or other (if you don't care where, nobody else does), and had made acquaintance with him, and become very fond of his children. Now, Sir John knew nothing about sea-cockyolybirds, and cared less, provided the fishmonger sent him good fish for dinner, and My Lady knew as little : but she thought it proper that the children should know something. For in the stupid old times, you must understand, children were taught to know one thing, and to know it well : but in these enlightened new times they are taught to know a little about everything, and to know it all ill ; which is a great deal pleasanter and easier, and therefore quite right.

So Ellie and he were walking on the rocks, and he was showing her about one in ten thousand of all the beautiful and curious things which are to be seen there. But little Ellie was not satisfied with them at all. She liked much better to play with live children, or even with dolls, which she could pretend were alive ; and at last she said honestly, “ I don't care about all these things, because they can't play with me, or talk to me. If there were little children now in the water, as there used to be, and I could see them, I should like that.”

“ Children in the water, you strange little duck ? ” said the professor.

“ Yes,” said Ellie. “ I know there used to be children in the water, and mermaids too, and mermen. I saw them all in a picture at home, of a beautiful lady sailing in a car drawn by dolphins, and babies flying round her,

and one sitting in her lap ; and the mermaids swimming and playing, and the mermen trumpeting on conch-shells ; and it is called ' The Triumph of Galatea ' ; and there is a burning mountain in the picture behind. It hangs on the great staircase, and I have looked at it ever since I was a baby, and dreamt about it a hundred times ; and it is so beautiful, that it must be true."

Ah, you dear little Ellie, fresh out of heaven ! when will people understand that one of the deepest and wisest speeches which can come out of a human mouth is that—
" It is so beautiful that it must be true."

Not till they give up believing that Mr. John Locke (good man and honest though he was) was the wisest man that ever lived on earth : and recollect that a wiser man than he lived long before him ; and that his name was Plato the son of Ariston.

But the professor was not in the least of that opinion. He held very strange theories about a good many things. He had even got up once at the British Association, and declared that apes had hippopotamus majors in their brains just as men have. Which was a shocking thing to say ; for, if it were so, what would become of the faith, hope, and charity of immortal millions ? You may think that there are other more important differences between you and an ape, such as being able to speak, and make machines, and know right from wrong, and say your prayers, and other little matters of that kind : but that is a child's fancy, my dear. Nothing is to be depended on but the great hippopotamus test. If you have a hippopotamus major in your brain, you are no ape, though you had four hands, no feet, and were more apish than the apes of all apecies. But, if a hippopotamus major is ever discovered in one single ape's brain, nothing will save your great-great-great-great-great-great-great-great-great-great-greater-greatest-grandmother from having been an ape

too. No, my dear little man ; always remember that the one true, certain, final, and all-important difference between you and an ape is, that you have a hippopotamus major in your brain, and it has none ; and that, therefore, to discover one in its brain will be a very wrong and dangerous thing, at which every one will be very much shocked, as we may suppose they were at the professor.— Though really, after all, it don't much matter : because— as Lord Dundreary and others would put it—nobody but men have hippopotamuses in their brains ; so, if a hippopotamus was discovered in an ape's brain, why it would not be one, you know, but something else.

But the professor had gone, I am sorry to say, even further than that ; for he had read at the British Association at Melbourne, Australia, in the year 1999, a paper, who assured every one who found himself the better or wiser for the news, that there were not, never had been, and could not be, any rational or half-rational beings except men, anywhere, anywhen, or anyhow ; that nymphs, satyrs, fauns, inui, dwarfs, trolls, elves, gnomes, fairies, brownies, nixes, wilis, kobolds, leprechaunes, cluricaunes, banshees, will-o-the-wisps, follets, lutins, magots, goblins, afrits, marids, jinns, ghouls, peris, deevs, angels, archangels, imps, bogies, or worse, were nothing at all, and pure bosh and wind. And he had to get up very early in the morning to prove that, and to eat his breakfast overnight : but he did it, at least to his own satisfaction. Whereon a certain great divine, and a very clever divine was he, called him a regular Sadducee ; and probably he was quite right. Whereon the professor, in return, called him a regular Pharisee ; and probably he was quite right too. But they did not quarrel in the least ; for, when men are men of the world, hard words run off them like water off a duck's back. So the professor and the divine met at dinner that evening, and sat

together on the sofa afterwards for an hour, and talked over the state of female labor on the antarctic continent (for nobody talks shop after his claret), and each vowed that the other was the best company he ever met in his

life. What an advantage it is to be men of the world!

From all which you may guess that the professor was not the least of little Ellie's opinion. So he gave her a succinct compendium of his famous paper at the British Association, in a form suited for the youthful mind. But, as we have gone over his arguments against water-babies once already, which is once too often, we will not repeat them here.

Now little Ellie was, I suppose, a stupid little girl; for, instead of being convinced by Professor Pthmln-sprts' arguments, she only asked the same question over again.

"But why are there not water-babies?"

I trust and hope that it was because the professor trod at that moment on the edge of a very sharp mussel, and hurt one of his corns sadly, that he answered quite sharply, forgetting that he was a scientific man, and therefore ought to have known that he couldn't know; and that he was a logician, and therefore ought to have known that he could not prove an universal negative;—I say, I trust and hope it was because the mussel hurt his corn, that the professor answered quite sharply. —

"Because there a'n't."

Which was not even good English, my dear little boy; for, as you must know from Aunt Agitate's Arguments, the professor ought to have said, if he was so angry as to say anything of the kind,—Because there are not: or are none: or are none of them: or, (if he had been reading Aunt Agitate too,) because they do not exist.

And he groped with his net under the weeds so violently, that, as it befell, he caught poor little Tom.

He felt the net very heavy ; and lifted it out quickly, with Tom all entangled in the meshes.

"Dear me !" he cried. "What a large pink Holothurian ; with hands, too ! It must be connected with Synapta."

And he took him out.

"It has actually eyes !" he cried. "Why, it must be a Cephalopod ! This is most extraordinary !"

"No, I a'n't !" cried Tom, as loud as he could ; for he did not like to be called bad names.

"It is a water-baby !" cried Ellie ; and of course it was.

"Water-fiddlesticks, my dear !" said the professor ; and he turned away sharply.

There was no denying it. It was a water-baby and he had said a moment ago that there were none. What was he to do ?

He would have liked, of course, to have taken Tom home in a bucket. He would not have put him in spirits. Of course not. He would have kept him alive, and petted him (for he was a very kind old gentleman), and written a book about him, and given him two long names, of which the first would have said a little about Tom, and the second all about himself ; for of course he would have called him Hydrotecnon Ptthmlnsprtsianum, or some other long name like that ; for they are forced to call everything by long names now, because they have used up all the short ones, ever since they took to making nine species out of one. But—what would all the learned men say to him after his speech at the British Association ? And what would Ellie say, after what he had just told her ?

There was a wise old heathen once, who said, "*Maxima debetur pueris reverentia*"—The greatest reverence is due to children ; that is, that grown people should never

say or do any thing wrong before children, lest they should set them a bad example.—Cousin Cramchild says it means, “The greatest respectfulness is expected from little boys.” But he was raised in a country where little boys are not expected to be respectful, because all of them are as good as the President;—well, every one knows his own concerns best; so perhaps they are. But poor Cousin Cramchild, to do him justice, not being of that opinion, and having a moral mission, and being no scholar to speak of, and hard up for an authority—why, it was a very great temptation for him. But some people, and I am afraid the professor was one of them, interpret that in a more strange, curious, one-sided, left-handed, topsy-turvy, inside-out, behind-before fashion, than even Cousin Cramchild; for they make it mean, that you must show your respect for children by never confessing yourself in the wrong to them, even if you know that you are so, lest they should lose confidence in their elders.

Now, if the professor had said to Ellie, “Yes, my darling, it is a water-baby, and a very wonderful thing it is: and it shows how little I know of the wonders of nature, in spite of forty years’ honest labor. I was just telling you that there could be no such creatures; and, behold! here is one come to confound my conceit, and show me that Nature can do, and has done, beyond all that man’s poor fancy can imagine. So, let us thank the Maker, and Inspirer, and Lord of Nature for all His wonderful and glorious works, and try and find out something about this one”:—I think that, if the professor had said that, little Ellie would have believed him more firmly, and respected him more deeply, and loved him better, than ever she had done before. But he was of a different opinion. He hesitated a moment. He longed to keep Tom, and yet he half wished he never had caught him; and, at last, he quite longed to get rid of him. So

he turned away, and poked Tom with his finger, for want of anything better to do ; and said carelessly, " My dear little maid, you must have dreamt of water-babies last night, your head is so full of them."

Now Tom had been in the most horrible and unspeakable fright all the while ; and had kept as quiet as he could, though he was called a Holothurian and a Cephalopod ; for it was fixed in his little head that if a man with clothes on caught him, he might put clothes on him too, and make a dirty black chimney-sweep of him again. But when the professor poked him, it was more than he could bear ; and, between fright and rage, he turned to bay as valiantly as a mouse in a corner, and bit the professor's finger till it bled.

" Oh ! ah ! yah ! " cried he ; and glad of an excuse to be rid of Tom, dropped him on to the sea-weed, and thence he dived into the water, and was gone in a moment.

" But it was a water-baby, and I heard it speak ! " cried Ellie. " Ah, it is gone ! " And she jumped down off the rock to try and catch Tom before he slipt into the sea.

Too late ! and what was worse, as she sprang down she slipped, and fell some six feet, with her head on a sharp rock, and lay quite still.

The professor picked her up, and tried to waken her, and called to her, and cried over her, for he loved her very much : but she would not waken at all. So he took her up in his arms, and carried her to her governess, and they all went home ; and little Ellie was put to bed, and lay there quite still ; only now and then she woke up, and called out about the water-baby : but no one knew what she meant, and the professor did not tell, for he was ashamed to tell.

And, after a week, one moonlight night, the fairies

came flying in at the window, and brought her such a pretty pair of wings, that she could not help putting them on ; and she flew with them out of the window, and over the land, and over the sea, and up through the clouds, and nobody heard or saw anything of her for a very long while.

And this is why they say that no one has ever yet seen a water-baby. For my part, I believe that the naturalists get dozens of them when they are out dredging : but they say nothing about them, and throw them overboard again, for fear of spoiling their theories. But, you see the professor was found out, as every one is in due time. A very terrible old fairy found the professor out ; she felt his bumps, and cast his nativity, and took the lunars of him carefully inside and out ; and so she knew what he would do as well as if she had seen it in a print book, as they say in the dear old west country ; and he did it ; and so he was found out beforehand, as everybody always is ; and the old fairy will find out the naturalists some day, and put them in the "Times" ; and then on whose side will the laugh be ?

So the old fairy took him in hand very severely there and then. But she says she is always most severe with the best people, because there is most chance of curing them, and therefore they are the patients who pay her best ; for she has to work on the same salary as the Emperor of China's physicians (it is a pity that all do not), no cure, no pay.

So she took the poor professor in hand ; and because he was not content with things as they are, she filled his head with things as they are not, to try if he would like them better ; and because he did not choose to believe in a water-baby when he saw it, she made him believe in worse things than water-babies—in unicorns, fire-drakes, manticoras, basilisks, amphisbœnas, griffins, phœnixes, rocs, orcs, dog-headed men, three-headed dogs, three-

bodied geryons, and other pleasant creatures, which folks think never existed yet, and which folks hope never will exist, though they know nothing about the matter, and never will; and these creatures so upset, terrified, flustered, aggravated, confused, astounded, horrified, and totally flabbergasted the poor professor, that the doctors said that he was out of his wits for three months; and perhaps they were right, as they are now and then.

So all the doctors in the county were called in, to make a report on his case; and of course every one of them flatly contradicted the other: else what use is there in being men of science? But at last the majority agreed on a report, in the true medical language, one half bad Latin, the other half worse Greek, and the rest what might have been English, if they had only learnt to write it. And this is the beginning thereof—

“The subanhypaposupernal anastomoses of peritomic diacellurite in the encephalo digital region of the distinguished individual of whose symptomatic phœnomena we had the melancholy honor (subsequently to a preliminary diagnostic inspection) of making an inspectorial diagnosis, presenting the interexclusively quadrilateral and antinomian diathesis known as Bumpsterhausen’s blue follicles, we proceeded—”

But what they proceeded to do my lady never knew, for she was so frightened at the long words that she ran for her life, and locked herself into her bedroom, for fear of being squashed by the words and strangled by the sentence. A boa-constrictor, she said, was bad company enough; but what was a boa-constrictor made of paving-stones?

“It was quite shocking! What can they think is the matter with him?” said she to the old nurse.

"That his wit's just addled; may be wi' unbelief and heathenry," quoth she.

"Then why can't they say so?"

And the heaven, and the sea, and the rocks, and the vales reëchoed—"Why indeed?" But the doctors never heard them.

So she made Sir John write to the "Times" to command the Chancellor of the Exchequer for the time being to put a tax on long words:—

A light tax on words over three syllables, which are necessary evils, like rats: but, like them, must be kept down judiciously.

A heavy tax on words over four syllables, as heterodoxy, spontaneity, spiritualism, spuriousness, etc.

And on words over five syllables (of which I hope no one will wish to see any examples), a totally prohibitory tax.

And a similar prohibitory tax on words derived from three or more languages at once; words derived from two languages having become so common, that there was no more hope of rooting out them than of rooting out peth-winds.

The Chancellor of the Exchequer, being a scholar and a man of sense, jumped at the notion; for he saw in it the one and only plan for abolishing Schedule D: but when he brought in his bill, most of the Irish members, and (I am sorry to say) some of the Scotch likewise, opposed it most strongly, on the ground that in a free country no man was bound either to understand himself or to let others understand him. So the bill fell through on the first reading; and the Chancellor, being a philosopher, comforted himself with the thought, that it was not the first time that a woman had hit off a grand idea, and the men turned up their stupid noses thereat.

Now the doctors had it all their own way; and to

work they went in earnest, and they gave the poor professor divers and sundry medicines, as prescribed by the ancients and moderns, from Hippocrates to Feuchtersleben, as below, viz :—

1. Hellebore, to wit—

Hellebore of Æta.

Hellebore of Galatia.

Hellebore of Sicily.

And all other Hellebores, after the method of the Helleborizing Helleborists of the Helleboric era.

But that would not do. Bumpsterhausen's blue follicles would not stir an inch out of his encephalo digital region.

2. Trying to find out what was the matter with him ; after the method of—

Hippocrates.

Aretæus.

Celsus.

Cœlius Aurelianus.

And Galen : but they found that a great deal too much trouble, as most people have since ; and so had recourse to—

3. Borage.

Cauteries.

Boring a hole in his head to let out fumes, which (says Gordonius) “will, without doubt, do much good.” But it didn't.

Bezoar stone.

Diamargaritum.

A ram's brain boiled in spice.

Oil of wormwood.

Water of Nile.

Capers.

Good wine (but there was none to be got).

The water of a smith's forge.

Hops.

Ambergris.

Mandrake pillows.

Dormouse, fat.

Hares' ears.

Starvation.

Camphor.

Salts and Senna.

Musk.

Opium.

Strait-waistcoats.

Bullyings.

Bumpings.

Blisterings.

Bleedings.

Bucketings with cold water.

Knockings down.

Kneeling on his chest till they broke it in, &c. &c.;
after the mediæval or monkish method; but that
would not do. Bumpsterhausen's blue follicles
stuck there still.

Then—

4. Coaxing.

Kissing.

Champagne and turtle.

Red herrings and soda water.

Good advice.

Gardening.

Croquet.

Musical soirées.

Aunt Sally.

Mild tobacco.

The "Saturday Review."

A carriage with outriders, &c., &c., after the modern
method. But that would not do.

And if he had but been a convict lunatic, and had shot at the Queen, killed all his creditors to avoid paying them, or indulged in any other little amiable eccentricity of that kind, they would have given him, in addition,—

The healthiest situation in England, on Easthampstead Plain.

Free run of Windsor Forest.

The “Times” every morning.

A double-barrelled gun and pointers, and leave to shoot three Wellington College boys a week (not more) in case black game were scarce.

But as he was neither mad enough nor bad enough to be allowed such luxuries, they grew desperate, and fell into bad ways, viz :—

5. Suffumigations of sulphur.

Heerwiggius his “Incomparable drink for madmen”; only they could not find out what it was.

Suffumigation of liver of the fish — only they had forgotten its name, so Dr. Gray could not well procure them a specimen.

Metallic tractors.

Holloway’s Ointment.

Electro-biology.

Valentine Greatrakes his Stroking Cure.

Spirit-rapping.

Holloway’s Pills.

Table-turning.

Morrison’s Pills.

Homœopathy.

Parr’s Life Pills.

Mesmerism.

Pure Bosh.

Exorcisms, for which they read *Malleus Maleficarum*, *Nideri Formicarium*, *Delrio*, *Wierus*, &c., but could not get one that mentioned water babies.

Hydropathy.

Madame Rachel's Elixir of Youth.

The Poughkeepsie Seer his Prophecies.

The distilled liquor of addle eggs.

Pyropathy, as successfully employed by the old inquisitors to cure the malady of thought, and now by the Persian Mollahs to cure that of rheumatism.

Geopathy, or burying him.

Atmopathy, steaming him.

Sympathy, after the method of Basil Valentine his Triumph of Antimony, and Kenelm Digby his Weapon-salve, which some call a hair of the dog that bit him.

Hermopathy, or pouring mercury down his throat, to move the animal spirits.

Meteoropathy, or going up to the moon to look for his lost wits, as Ruggiero did for Orlando Furioso's: only, having no hippogriff, they were forced to use a balloon; and, falling into the North Sea, were picked up by a Yarmouth herring-boat, and came home much the wiser, and all over scales.

Antipathy, or using him like "a man and a brother."

Apathy, or doing nothing at all.

With all other ipathies and opathies which Noodle has invented, and Foodle tried, since black-fellows chipped flints at Abbeville,—which is a considerable time ago, to judge by the Great Exhibition.

But nothing would do; for he screamed and cried all day for a water-baby, to come and drive away the monsters; and of course they did not try to find one, because they did not believe in them, and were thinking of nothing but Bumpsterhausen's blue follicles; having, as usual, set the cart before the horse, and taken the effect for the cause.

So they were forced at last to let the poor professor ease his mind by writing a great book, exactly contrary to all his old opinions ; in which he proved that the moon was made of green cheese, and that all the mites in it (which you may see sometimes quite plain through a telescope, if you will only keep the lens dirty enough, as Mr. Weekes kept his voltaic battery) are nothing in the world but little babies, who are hatching and swarming up there in millions, ready to come down into this world whenever children want a new little brother or sister.

Which must be a mistake, for this one reason : that, there being no atmosphere round the moon, (though some one or other says there is, at least on the other side, and that he has been round at the back of it to see, and found that the moon was just the shape of a Bath bun, and so wet that the man in the moon went about on Midsummer-day in Macintoshes and Cording's boots, spearing eels and sneezing) ; that, therefore, I say, there being no atmosphere, there can be no evaporation ; and, therefore, the dew point can never fall below 71·5 below zero of Fahrenheit ; and, therefore, it cannot be cold enough there about four o'clock in the morning to condense the babies' mesenteric apophthegms into their left ventricles ; and, therefore, they can never catch the whooping-cough ; and if they do not have whooping-cough, they cannot be babies at all ; and, therefore, there are no babies in the moon.—Q. E. D.

Which may seem a roundabout reason ; and so, perhaps, it is ; but you will have heard worse ones in your time, and from better men than you are.

But one thing is certain ; that, when the good old doctor got his book written, he felt considerably relieved from Bumpsterhausen's blue follicles, and a few things infinitely worse ; to wit, from pride and vainglory, and from blindness and hardness of heart ; which are the true

causes of Bumpsterhausen's blue follicles, and of a good many other ugly things beside. Whereon the foul flood-water in his brains ran down, and cleared to a fine coffee-color, such as fish like to rise in, till very fine clean, fresh-run fish did begin to rise in his brains; and he caught two or three of them (which is exceedingly fine sport, for brain rivers) and anatomized them carefully, and never mentioned what he found out from them, except to little children; and became ever after a sadder and a wiser man; which is a very good thing to become, my dear little boy, even though one has to pay a **heavy** price for the blessing.

CHAPTER V.

"Stern Lawgiver ! yet dost wear
 The Godhead's most benignant grace;
 Nor know we anything so fair
 As is the smile upon thy face :
 Flowers laugh before thee on their beds ;
 And fragrance in thy footing treads ;
 Thou dost preserve the stars from wrong ;
 And the most ancient heavens, through thee, are fresh and strong."

WORDSWORTH.—*Ode to Duty.*

But what became of little Tom ?

He slipt away off the rocks into the water, as I said before. But he could not help thinking of little Ellie. He did not remember who she was ; but he knew that she was a little girl, though she was a hundred times as big as he. That is not surprising : size has nothing to do with kindred. A tiny weed may be first-cousin to a great tree ; and a little dog like Vick knows that Lioness is a dog too, though she is twenty times larger than herself. So Tom knew that Ellie was a little girl, and thought about her all that day, and longed to have had her to play with ; but he had very soon to think of something else. And here is the account of what happened to him, as it was published next morning in the "Water-proof Gazette," on the finest watered paper, for the use of the great fairy Mrs. Bedonebyasyoudid, who reads the news very carefully every morning, and especially the police cases, as you will hear very soon.

He was going along the rocks in three-fathom water, watching the pollock catch prawns, and the wrasses

nibble barnacles off the rocks, shells and all, when he saw a round cage of green withes ; and inside it, looking very much ashamed of himself, sat his friend the lobster, twiddling his horns, instead of thumbs.

“ What ! have you been naughty, and have they put you in the lock-up ? ” asked Tom.

The lobster felt a little indignant at such a notion, but he was too much depressed in spirits to argue ; so he only said, “ I can’t get out.”

“ Why did you get in ? ”

“ After that nasty piece of dead fish.” He had thought it looked and smelt very nice when he was outside, and so it did, for a lobster ; but now he turned round and abused it because he was angry with himself.

“ Where did you get in ? ”

“ Through that round hole at the **top**.”

“ Then why don’t you get out through it ? ”

“ Because I can’t ; ” and the lobster twiddled his horns more fiercely than ever, but he was forced to confess.

“ I have jumped upwards, downwards, backwards, and sideways, at least four thousand times ; and I can’t get out : I always get up underneath there, and can’t find the hole.”

Tom looked at the trap, and having more wit than the lobster, he saw plainly enough what was the matter ; as you may if you will look at a lobster-pot.

“ Stop a bit,” said Tom. “ Turn your tail up to me, and I’ll pull you through hindforemost, and then you won’t stick in the spikes.”

But the lobster was so stupid and clumsy that he couldn’t hit the hole. Like a great many fox-hunters, he was very sharp as long as he was in his own country ; but as soon as they get out of it they lose their heads ; and so the lobster, so to speak, lost his tail.

Tom reached and clawed down the hole after him, till

he caught hold of him ; and then, as was to be expected, the clumsy lobster pulled him in head foremost.

"Hullo ! here is a pretty business," said Tom. "Now take your great claws, and break the points off those spikes, and then we shall both get out easily."

"Dear me, I never thought of that," said the lobster ; "and after all the experience of life that I have had !"

You see, experience is of very little good unless a man, or a lobster, has wit enough to make use of it. For a good many people, like old Polonius, have seen all the world, and yet remain little better than children after all.

But they had not got half the spikes away, when they saw a great dark cloud over them ; and low and behold, it was the otter.

How she did grin and grin when she saw Tom. "Yar !" said she, "you little meddlesome wretch, I have you now ! I will serve you out for telling the salmon where I was !" And she crawled all over the pot to get in.

Tom was horribly frightened, and still more frightened when she found the hole in the top, and squeezed herself right down through it, all eyes and teeth. But no sooner was her head inside than valiant Mr. Lobster caught her by the nose, and held on.

And there they were all three in the pot, rolling over and over, and very tight packing it was. And the lobster tore at the otter, and the otter tore at the lobster, and both squeezed and thumped poor Tom till he had no breath left in his body ; and I don't know what would have happened to him if he had not at last got on the otter's back, and safe out of the hole.

He was right glad when he got out : but he would not desert his friend who had saved him ; and the first time he saw his tail uppermost he caught hold of it, and pulled with all his might.

But the lobster would not let go.

"Come along," said Tom ; "don't you see she is dead?" And so she was, quite drowned and dead.

And that was the end of the wicked otter.

But the lobster would not let go.

"Come along, you stupid old *stick-in-the-mud*," cried Tom, "or the fisherman will catch you!" And that was true, for Tom felt some one above beginning to haul up the pot.

But the lobster would not let go.

Tom saw the fisherman haul him up to the boatside, and thought it was all up with him. But when Mr. Lobster saw the fisherman, he gave such a furious and tremendous snap, that he snapped out of his hand, and out of the pot, and safe into the sea. But he left his knobbed claw behind him ; for it never came into his stupid head to let go after all, so he just shook his claw off as the easier method. It was something of a bull, that ; but you must know the lobster was an Irish lobster, and was hatched off Island Magee at the mouth of Belfast Lough.

Tom asked the lobster why he never thought of letting go. He said very determinedly that it was a point of honor among lobsters. And so it is, as the mayor of Plymouth found out once to his cost—eight or nine hundred years ago, of course ; for if it had happened lately it would be personal to mention it.

For one day he was so tired with sitting on a hard chair, in a grand furred gown, with a gold chain round his neck, hearing one policeman after another come in and sing, "What shall we do with the drunken sailor, so early in the morning?" and answering them each exactly alike—

"Put him in the round-house till he gets sober, so early in the morning"—

That, when it was over, he jumped up, and played leap-frog with the town-clerk till he burst his buttons,

and then had his luncheon, and burst some more buttons, and then said : " It is a low spring tide ; I shall go out this afternoon and cut my capers."

Now he did not mean to cut such capers as you eat with boiled mutton. It was the commandant of artillery at Valetta who used to amuse himself with cutting them, and who stuck upon one of the bastions a notice, " No one allowed to cut capers here but me," which greatly edified the midshipmen in port, and the Maltese on the Nix Mangiare stairs. But all that the mayor meant was that he would go and have an afternoon's fun, like any school-boy, and catch lobsters with an iron hook.

So to the Mewstone he went, and for lobsters he looked. And, when he came to a certain crack in the rocks, he was so excited, that, instead of putting in his hook, he put in his hand ; and Mr. Lobster was at home, and caught him by the finger, and held on.

" Yah ! " said the mayor, and pulled as hard as he dared ; but the more he pulled the more the lobster pinched, till he was forced to be quiet.

Then he tried to get his hook in with his other hand ; but the hole was too narrow.

Then he pulled again ; but he could not stand the pain.

Then he shouted and bawled for help ; but there was no one nearer him than the men-of-war inside the break-water.

Then he began to turn a little pale ; for the tide flowed and still the lobster held on.

Then he turned quite white ; for the tide was up to his knees, and still the lobster held on.

Then he thought of cutting off his finger ; but he wanted two things to do it with—courage and a knife, and he had got neither.

Then he turned quite yellow ; for the tide was up to his waist, and still the lobster held on.

Then he thought over all the naughty things he ever had done ; all the sand which he had put in the sugar, and the sloe-leaves in the tea, and the water in the treacle, and the salt in the tobacco (because his brother was a brewer, and a man must help his own kin).

Then he turned quite blue ; for the tide was up to his breast, and still the lobster held on.

Then, I have no doubt, he repented fully of all the said naughty things which he had done, and promised to mend his life, as too many do when they think they have no life left to mend. Whereby, as they fancy, they make a very cheap bargain. But the old fairy with the birch rod soon undeceives them.

And then he grew all colors at once, and turned up his eyes like a duck in thunder ; for the water was up to his chin, and still the lobster held on.

And then came a man-of-war's boat round the Mewstone, and saw his head sticking up out of the water. One said it was a keg of brandy, and another that it was a cocoa-nut, and another that it was a buoy loose, and another that it was a black diver, and wanted to fire at it, which would not have been pleasant for the mayor ; but just then such a yell came out of a great hole in the middle of it that the midshipman in charge guessed what it was, and bade pull up to it as fast as they could. So somehow or other the Jack-tars got the lobster out, and set the mayor free, and put him ashore at the Barbican. He never went lobster-catching again ; and we will hope he put no more salt in the tobacco, not even to sell his brother's beer.

And that is the story of the Mayor of Plymouth, which has two advantages—first, that of being quite true ; and second, that of having (as folks say all good stories ought to have) no moral whatsoever : no more, indeed, has any part of this book, because it is a fairy tale, you know.

And now happened to Tom a most wonderful thing, for he had not left the lobster five minutes before he came upon a water-baby.

A real live water-baby, sitting on the white sand, very busy about a little point of rock. And when it saw Tom it looked up for a moment, and then cried, "Why you are not one of us. You are a new baby ! Oh, how delightful !"

And it ran to Tom, and Tom ran to it, and they hugged and kissed each other for ever so long, they did not know why. But they did not want any introductions there under the water.

At last Tom said, "Oh, where have you been all this while ? I have been looking for you so long, and I have been so lonely."

"We have been here for days and days. There are hundreds of us about the rocks. How was it you did not see us, or hear us when we sing and romp every evening before we go home ?"

Tom looked at the baby again, and then he said :

"Well this is wonderful ! I have seen things just like you again and again, but I thought you were shells, or sea-creatures. I never took you for water-babies like myself."

Now, was that not very odd ? So odd, indeed, that you will, no doubt, want to know how it happened, and why Tom could never find a water-baby till after he had got the lobster out of the pot. And, if you will read this story nine times over, and then think for yourself, you will find out why. It is not good for little boys to be told everything, and never to be forced to use their own wits. They would learn, then, no more than they do at Dr. Dulcimer's famous suburban establishment for the idler members of the youthful aristocracy, where the masters learn the

lessons, and the boys hear them—which saves a great deal of trouble—for the time being.

“Now,” said the baby, “come and help me, or I shall not have finished before my brothers and sisters come, and it is time to go home.”

“What shall I help you at?”

“At this poor dear little rock ; a great clumsy boulder came rolling by in the last storm, and knocked all its head off, and rubbed off all its flowers. And now I must plant it again with sea-weeds, and coralline, and anemones, and I will make it the prettiest little rock-garden on all the shore.”

So they worked away at the rock, and planted it and smoothed the sand down round it, and capital fun they had till the tide began to turn. And then Tom heard all the other babies coming, laughing and singing and shouting and romping ; and the noise they made was just like the noise of the ripple. So he knew that he had been hearing and seeing the water-babies all along ; only he did not know them, because his eyes and ears were not opened.

And in they came, dozens and dozens of them, some bigger than Tom, and some smaller, all in the neatest little white bathing-dresses ; and when they found that he was a new baby, they hugged him and kissed him, and then put him in the middle and danced round him on the sand, and there was no one ever so happy as poor little Tom.

“Now then,” they cried all at once, “we must come away home, we must come away home, or the tide will leave us dry. We have mended all the broken sea-weed, and put all the rock-pools in order, and planted all the shells again in the sand, and nobody will see where the ugly storm swept in last week.”

And this is the reason why the rock-pools are always

so neat and clean ; because the water-babies come in shore after every storm, to sweep them out, and comb them down, and put them all to rights again.

Only where men are wasteful and dirty, and let sewers run into the sea, instead of putting the stuff upon the fields, like thrifty reasonable souls ; or throw herrings' heads, and dead dog-fish, or any other refuse, into the water ; or in any way make a mess upon the clean shore, —there the water-babies will not come, sometimes not for hundreds of years (for they cannot abide anything smelly or foul) : but leave the sea-anemones and the crabs to clear away everything, till the good tidy sea has covered up all the dirt in soft mud and clean sand, where the water-babies can plant live cockles and whelks and razor-shells and sea-cucumbers and golden-combs, and make a pretty live garden again, after man's dirt is cleared away. And that, I suppose, is the reason why there are no water-babies at any watering-place which I have ever seen.

And where is the home of the water-babies ? In St. Brandan's fairy isle.

Did you never hear of the blessed St. Brandan, how he preached to the wild Irish, on the wild, wild Kerry coast ; he and five other hermits, till they were weary, and longed to rest ? For the wild Irish would not listen to them, or come to confession and to mass, but liked better to brew potheen, and dance the pater o'pee, and knock each other over the head with shillelaghs, and shoot each other from behind turf-dykes, and steal each other's cattle, and burn each other's homes ; till St. Brandan and his friends were weary of them, for they would not learn to be peaceable Christians at all.

So St. Brandan went out to the point of old Dunmore, and looked over the tide-way roaring round the Blasquets, at the end of all the world, and away into the ocean, and

sighed—"Ah, that I had wings as a dove!" And far away, before the setting sun, he saw a blue fairy sea, and golden fairy islands, and he said, "Those are the islands of the blest." Then he and his friends got into a hooker, and sailed away and away to the westward, and were never heard of more. But the people who would not hear him were changed into gorillas, and gorillas they are until this day.

And when St. Brandan and the hermits came to that fairy isle, they found it overgrown with cedars, and full of beautiful birds; and he sat down under the cedars, and preached to all the birds in the air. And they liked his sermons so well that they told the fishes in the sea; and they came, and St. Brandan preached to them; and the fishes told the water-babies, who live in the caves under the isle; and they came up by hundreds every Sunday, and St. Brandan got quite a neat little Sunday-school. And there he taught the water-babies for a great many hundred years, till his eyes grew too dim to see, and his beard grew so long that he dared not walk for fear of treading on it, and then he might have tumbled down. And at last he and the five hermits fell fast asleep under the cedar shades, and there they sleep unto this day. But the fairies took to the water-babies, and taught them their lessons themselves.

And some say that St. Brandan will awake, and begin to teach the babies once more; but some think that he will sleep on, for better for worse, till the coming of the Cocqigrués. But, on still clear summer evenings, when the sun sinks down into the sea, among golden cloud-capes and cloud-islands, and locks and friths of azure sky, the sailors fancy that they see, away to westward, St. Brandan's fairy isle.

But whether men can see it or not, St. Brandan's Isle once actually stood there; a great land out in the ocean,

which has sunk and sunk beneath the waves. Old Plato called it Atlantis, and told strange tales of the wise men who lived therein, and of the wars they fought in the old times. And from off that island came strange flowers, which linger still about this land :—the Cornish heath, and Cornish moneywort, and the delicate Venus's hair, and the London-pride which covers the Kerry mountains, and the little pink butterwort of Devon, and the great blue butterwort of Ireland, and the Connemara heath, and the bristle-fern of the Turk waterfall, and many a strange plant more ; all fairy tokens left for wise men and good children from off St. Brandan's Isle.

Now when Tom got there, he found that the isle stood all on pillars, and that its roots were full of caves. There were pillars of black basalt, like Staffa ; and pillars of green and crimson serpentine, like Kynance ; and pillars ribboned with red and white and yellow sandstone, like Livermead ; and there were blue grottos, like Capri ; and white grottos, like Adelsberg ; all curtained and draped with sea-weeds, purple and crimson, green and brown ; and strewn with soft white sand, on which the water-babies sleep every night. But, to keep the place clean and sweet, the crabs picked up all the scraps off the floor, and ate them like so many monkeys ; while the rocks were covered with ten thousand sea-anemones and corals and madrepores, who scavenged the water all day long, and kept it nice and pure. But, to make up to them for having to do such nasty work, they were not left black and dirty, as poor chimney-sweeps and dustmen are. No ; the fairies are more considerate and just than that ; and have dressed them all in the most beautiful colors and patterns, till they look like vast flower-beds of gay blossoms. If you think I am talking nonsense, I can only say that it is true ; and that an old gentleman named Fourier used to say that we ought to do the same by chimney-sweeps and

dustmen, and honor them instead of despising them ; and he was a very clever old gentleman, but, unfortunately for him and the world, as mad as a March-hare.

And, instead of watchmen and policemen to keep out nasty things at night, there were thousands and thousands of water-snakes ; and most wonderful creatures they were. They were all named after the Nereids, the sea-fairies who took care of them, Eunice and Polynoe, Phyllo-doe and Psamathe, and all the rest of the pretty darlings who swim round their Queen Amphitrite, and her car of cameo shell. They were dressed in green velvet, and black velvet, and purple velvet ; and were all jointed in rings ; and some of them had three hundred brains apiece, so that they must have been uncommonly shrewd detectives : and some had eyes in their tails ; and some had eyes in every joint, so that they kept a very sharp look-out ; and when they wanted a baby-snake, they just grew one at the end of their own tails, and when it was able to take care of itself it dropped off ; so that they brought up their families very cheaply. But if any nasty thing came by, out they rushed upon it ; and then out of each of their hundreds of feet there sprang a whole cutler's shop of.

Scythes,
Billhooks,
Pickaxes,
Forks,
Penknives,
Rapiers,
Sabres,
Yataghans,
Creeses,
Ghoorka swords,
Tucks

Javelins,
Lances,
Halberts,
Gisarines,
Poleaxes,
Fishhooks,
Bradawls,
Gimlets,
Corkscrews,
Pins,
Needles,

And so forth,

which stabbed, shot poked, pricked, scratched, ripped, pinked, and crimped those naughty beasts so terribly, that they had to run for their lives, or else be chopped into small pieces and be eaten afterwards. And, if that is not all, every word, true, then there is no faith in microscopes, and all is over with the Linnæan Society.

And there were the water-babies in thousands, more than Tom, or you either, could count :—all the little children whom the good fairies take to, because their cruel mothers and fathers will not ; all who are untaught and brought up heathens, and all who come to grief by ill-usage or ignorance or neglect ; all the little children who are overlaid, or given gin when they are young, or are let to drink out of hot kettles, or to fall into the fire ; all the little children in alleys and courts, and tumble-down cottages, who die by fever, and cholera, and measles, and scarlatina, and nasty complaints which no one has any business to have, and which no one will have some day, when folks have common sense ; and all the little children who have been killed by cruel masters, and wicked soldiers ; they were all there, except, of course, the babes of Bethlehem who were killed by wicked King Herod ; for they were taken straight to heaven long ago, as everybody knows, and we call them the Holy Innocents.

But I wish Tom had given up all his naughty tricks, and left off tormenting dumb animals, now that he had plenty of playfellows to amuse him. Instead of that, I am sorry to say, he would meddle with the creatures, all but the water-snakes, for they would stand no nonsense. So he tickled the madrepores, to make them shut up ; and frightened the crabs, to make them hide in the sand and peep out at him with the tips of their eyes : and put stones into the anemones' mouths, to make them fancy that their dinner was coming.

The other children warned him and said, " Take care

what you are at. Mrs. Bedonebyasyoudid is coming." But Tom never heeded them, being quite riotous with high spirits and good luck, till, one Friday morning early, Mrs. Bedonebyasyoudid came indeed.

A very tremendous lady she was ; and when the children saw her, they all stood in a row, very upright indeed, and smoothed down their bathing-dresses, and put their hands behind them, just as if they were going to be examined by the inspector.

And she had on a black bonnet, and a black shawl, and no crinoline at all ; and a pair of large green spectacles, and a great hooked nose, hooked so much that the bridge of it stood quite up above her eyebrows ; and under her arm she carried a great birch-rod. Indeed, she was so ugly, that Tom was tempted to make faces at her : but did not ; for he did not admire the look of the birch-rod under her arm.

And she looked at the children one by one, and seemed very much pleased with them, though she never asked them one question about how they were behaving ; and then began giving them all sorts of nice sea-things—sea-cakes, sea-apples, sea-oranges, sea-bull's-eyes, sea-toffee ; and to the very best of all she gave sea-ices, made out of sea-cows' cream which never melt under water.

And, if you don't quite believe me, then just think—What is more cheap and plentiful than sea-rock ? Then why should there not be sea-toffee as well ? And every one can find sea-lemons (ready quartered too) if they will look for them at low tide ; and sea-grapes too sometimes, hanging in bunches ; and, if you will go to Nice, you will find the fish-market full of sea-fruit, which they call "*frutta di mare*" ; though I suppose they call them "*fruits de mer*" now, out of compliment to that most successful, and therefore most immaculate, potentate who is seemingly desirous of inheriting the blessing pronounced on

those who remove their neighbors' landmark. And, perhaps, that is the very reason why the place is called Nice, because there are so many nice things in the sea there : at least, if it is not, it ought to be.

Now little Tom watched all these sweet things given away, till his mouth watered, and his eyes grew as round as an owl's. For he hoped that his turn would come at last ; and so it did. For the lady called him up, and held out her fingers with something in them, and popped it into his mouth ; and, lo and behold, it was a nasty cold hard pebble.

"You are a very cruel woman," said he, and began to whimper.

"And you are a very cruel boy ; who puts pebbles into the sea-anemones' mouths, to take them in, and make them fancy that they had caught a good dinner ? As you did to them, so I must do to you."

"Who told you that ?" said Tom.

"You did yourself, this very minute."

Tom had never opened his lips ; so he was very much taken aback indeed.

"Yes ; every one tells me exactly what they have done wrong ; and that without knowing it themselves. So there is no use trying to hide anything from me. Now go and be a good boy, and I will put no more pebbles in your mouth, if you put none in other creatures'."

"I did not know there was any harm in it," said Tom.

"Then you know now. People continually say that to me ; but I tell them, if you don't know that fire burns, that is no reason that it should not burn you ; and if you don't know that dirt breeds fever, that is no reason why the fevers should not kill you. The lobster did not know that there was any harm in getting into the lobster-pot ; but it caught him all the same."

"Dear me," thought Tom, "she knows everything!" And so she did, indeed.

"And so, if you do not know that things are wrong that is no reason why you should not be punished for them; though not as much, not as much, my little man," (and the lady looked very kindly, after all,) "as if you did know."

"Well, you are a little hard on a poor lad," said Tom.

"Not at all; I am the best friend you ever had in all your life. But I will tell you; I cannot help punishing people when they do wrong. I like it no more than they do; I am very often, very, very sorry for them, poor things: but I cannot help it. If I tried not to do it, I should do it all the same. For I work by machinery, just like an engine; and am full of wheels and springs inside; and am wound up very carefully, so that I cannot help going."

"Was it long ago since they wound you up?" asked Tom. For he thought, the cunning little fellow, "She will run down some day; or they may forget to wind her up, as old Grimes used to forget to wind up his watch when he came in from the public-house: and then I shall be safe."

"I was wound up once and for all, so long ago that I forget all about it."

"Dear me," said Tom, "you must have been made a long time!"

"I never was made, my child; and I shall go for ever and ever; for I am as old as Eternity, and yet as young as Time."

And there came over the lady's face a very curious expression—very solemn, and very sad; and yet very, very sweet. And she looked up and away, as if she were gazing through the sea, and through the sky, at something far, far off; and as she did so, there came such a

quiet, tender, patient, hopeful smile over her face, that Tom thought for the moment that she did not look ugly at all. And no more she did; for she was like a great many people who have not a pretty feature in their faces, and yet are lovely to behold, and draw little children's hearts to them at once; because, though the house is plain enough, yet from the windows a beautiful and good spirit is looking forth.

And Tom smiled in her face, she looked so pleasant for the moment. And the strange fairy smiled too, and said:

"Yes. You thought me very ugly, just now, did you not?"

Tom hung down his head, and got very red about the ears.

"And I am very ugly. I am the ugliest fairy in the world; and I shall be, till people behave themselves as they ought to do. And then I shall grow as handsome as my sister, who is the loveliest fairy in the world; and her name is Mrs. Doasyouwouldbedoneby. So she begins where I end, and I begin where she ends; and those who will not listen to her must listen to me, as you will see. Now, all of you run away, except Tom; and he may stay and see what I am going to do. It will be a very good warning for him to begin with, before he goes to school.

"Now, Tom, every Friday I come down here and call up all who have ill-used little children, and serve them as they served the children."

And at that Tom was frightened, and crept under a stone; which made the two crabs who lived there very angry, and frightened their friend the butter-fish into flapping hysterics: but he would not move for them.

And first she called up all the doctors who give little children so much physic, (they were most of them old

ones ; for the young ones have learnt better, all but a few army surgeons, who still fancy that a baby's inside is much like a Scotch grenadier's,) and she set them all in a row ; and very rueful they looked ; for they knew what was coming.

And first she pulled all their teeth out ; and then she bled them all round ; and then she dosed them with calomel, and jalap, and salts and senna, and brimstone and treacle ; and horrible faces they made ; and then she gave a great emetic of mustard and water, and no basins ; and began all over again ; and that was the way she spent the morning.

And then she called up a whole troop of foolish ladies, who pinched up their children's waists and toes ; and she laced them all up in tight stays, so that they were choked and sick, and their noses grew red, and their hands and feet swelled ; and then she crammed their poor feet into the most dreadful tight boots, and made them all dance, which they did most clumsily indeed ; and then she asked them how they liked it ; and when they said not at all, she let them go ; because they had only done it out of foolish fashion, fancying it was for their children's good, as if wasps' waists and pigs' toes could be pretty or wholesome, or of any use to anybody.

Then she called up all the careless nursery-maids, and stuck pins into them all over, and wheeled them about in perambulators with tight straps across their stomachs and their heads and arms hanging over the side, till they were quite sick and stupid, and would have had sun-strokes : but, being under the water, they could only have water-strokes ; which, I assure you, are nearly as bad, as you will find if you try to sit under a mill-wheel. And mind—when you hear a rumbling at the bottom of the sea, sailors will tell you that it is a ground-*wee'* : but

now you know better. It is the old lady wheeling the maids about in perambulators.

And by that time she was so tired, she had to go to luncheon.

And after luncheon she set to work again, and called up all the cruel schoolmasters—whole regiments and brigades of them ; and, when she saw them she frowned most terribly, and set to work in earnest, as if the best part of the day's work was to come. More than half of them were nasty, dirty, frowzy, grubby, smelly old monks, who, because they dare not hit a man of their own size, amused themselves with beating little children instead ; as you may see in the picture of old Pope Gregory (good man and true though he was, when he meddled with things which he did understand), teaching children to sing their fa-fa-mi-fa with a cat-o'nine tails under his chair : but, because they never had any children of their own, they took into their heads (as some folks do still) that they were the only people in the world who knew how to manage children ; and they first brought into England, in the old Anglo-Saxon times, the fashion of treating free boys, and girls too, worse than you would treat a dog or a horse ; but Mrs. Bedonebyasyoudid has caught them all long ago, and given them many a taste of their own rods ; and much good may it do them.

And she boxed their ears, and thumped them over the head with rulers, and pandied their hands with canes, and told them that they told stories, and were this and that bad sort of people ; and the more they were very indignant, and stood upon their honor, and declared they told the truth, the more she declared they were not, and that they were only telling lies ; and at last she birched them all round soundly with her great birch-rod, and set them each an imposition of three hundred thousand lines

of Hebrew to learn by heart before she came back next Friday. And at that they all cried and howled so, that their breaths came all up through the sea like bubbles out of soda-water; and that is one reason of the bubbles in the sea. There are others; but that is the one which principally concerns little boys. And by that time she was so tired that she was glad to stop; and, indeed, she had done a very good day's work.

Tom did not quite dislike the old lady; but he could not help thinking her a little spiteful,—and no wonder if she was, poor old soul; for, if she has to wait to grow handsome till people do as they would be done by, she will have to wait a very long time.

Poor old Mrs. Bedonebyasyoudid! she has a great deal of hard work before her, and had better have been born a washerwoman, and stood over a tub all day; but, you see, people cannot always choose their own profession.

But Tom longed to ask her one question; and after all whenever she looked at him, she did not look cross at all; and now and then there was a funny smile in her face, and she chuckled to herself in a way which gave Tom courage, and at last he said:

“Pray, ma'am, may I ask you a question?”

“Certainly, my little dear.”

“Why don't you bring all the bad masters here, and serve them out too? The butties that knock about the poor collier-boys; and the nailers that file off their lads' noses and hammer their fingers; and all the master-sweeps, like my master Grimes? I saw him fall into the water long ago; so I surely expected he would have been here. I'm sure he was bad enough to me.”

Then the old lady looked so very stern that Tom was quite frightened, and sorry that he had been so bold. But she was not angry with him. She only answered, “I look after them all the week round; and they are in a very dif-

ferent place from this, because they knew that they were doing wrong."

She spoke very quietly ; but there was something in her voice which made Tom tingle from head to foot, as if he had got into a shoal of sea-nettles.

"But these people," she went on, "did not know that they were doing wrong : they were only stupid and impatient ; and therefore I only punish them till they become patient, and learn to use their common sense like reasonable beings. But as for chimney-sweeps, and collier-boys, and nailer lads, my sister has set good people to stop all that sort of thing ; and very much obliged to her I am ; for if she could only stop the cruel masters from ill-using poor children, I should grow handsome at least a thousand years sooner. And now do you be a good boy, and do as you would be done by, which they did not ; and then, when my sister, Madame Doasyouwouldbedoneby, comes on Sunday, perhaps she will take notice of you, and teach you how to behave. She understands that better than I do." And so she went.

Tom was very glad to hear that there was no chance of meeting Grimes again, though he was a little sorry for him, considering that he used sometimes to give him the leavings of the beer : but he determined to be a very good boy all Saturday ; and he was ; for he never frightened one crab, nor tickled any live corals, nor put stones into the sea-anemones' mouths, to make them fancy they had got a dinner ; and, when Sunday morning came, sure enough, Mrs. Doasyouwouldbedoneby came too. Whereat all the little children began dancing and clapping their hands, and Tom danced too with all his might.

And as for the pretty lady, I cannot tell you what the color of her hair was, or of her eyes ; no more could Tom ; for when any one looks at her, all they can think of is, that she has the sweetest, kindest, tenderest, funniest,

merriest face they ever saw, or want to see. But Tom saw that she was a very tall woman, as tall as her sister ; but instead of being gnarly, and horny, and scaly, and prickly, like her, she was the most nice, soft, fat, smooth, pussy, cuddly, delicious creature who ever nursed a baby : and she understood babies thoroughly, for she had plenty of her own, whole rows and regiments of them, and has to this day. And all her delight was, whenever she had a spare moment, to play with babies, in which she showed herself a woman of sense ; for babies are the best company, and the pleasantest playfellows, in the world ; at least, so all the wise people in the world think. And therefore when the children saw her, they naturally all caught hold of her, and pulled her till she sat down on a stone, and climbed into her lap, and clung round her neck, and caught hold of her hands ; and then they all put their thumbs into their mouths, and began cuddling and purring like so many kittens, as they ought to have done. While those who could get nowhere else sat down on the sand, and cuddled her feet,—for no one, you know, wears shoes in the water, except horrid old bathing-women, who are afraid of the water-babies pinching their horny toes. And Tom stood staring at them ; for he could not understand what it was all about.

“ And who are you, you little darling ? ” she said.

“ Oh, that is the new baby ! ” they all cried, pulling their thumbs out of their mouths ; “ and he never had any mother,” and they all put their thumbs back again, for they did not wish to lose any time.

“ Then I will be his mother, and he shall have the very best place ; so get out all of you, this moment.”

And she took up two great armfuls of babies—nine hundred under one arm, and thirteen hundred under the other—and threw them away, right and left, into the water. But they minded it no more than the naughty

boys in Struwelpeter minded when St. Nicholas dipped them in his inkstand ; and did not even take their thumbs out of their mouths, but came paddling and wriggling back to her like so many tadpoles, till you could see nothing of her from head to foot for the swarm of little babies.

But she took Tom in her arms, and laid him in the softest place of all, and kissed him, and patted him, and talked to him, tenderly and low, such things as he had never heard before in his life ; and Tom looked up into her eyes, and loved her, and loved, till he fell fast asleep from pure love.

And when he woke, she was telling the children a story. And what story did she tell them ? One story she told them, which begins every Christmas Eve, and yet never ends at all for ever and ever ; and, as she went on, the children took their thumbs out of their mouths, and listened quite seriously ; but not sadly at all ; for she never told them anything sad ; and Tom listened too, and never grew tired of listening. And he listened so long that he fell fast asleep again, and, when he woke, the lady was nursing him still.

“ Don’t go away,” said little Tom. “ This is so nice. I never had any one to cuddle me before.”

“ Don’t go away,” said all the children ; “ you have not sung us one song.”

“ Well, I have time for only one. So what shall it be ? ”

“ The doll you lost ! The doll you lost ! ” cried all the babies at once.

So the strange fairy sang :—

I once had a sweet little doll, dears,
The prettiest doll in the world ;
Her cheeks were so red and so white, dears,
And her hair was so charmingly curled.

But I lost my poor little doll, dears,
As I played in the heath one day ;
And I cried for her more than a week, dears ;
But I never could find where she lay.

I found my poor little doll, dears,
As I played in the heath one day :
Folks say she is terribly changed, dears,
For her paint is all washed away,
And her arm trodden off by the cows, dears,
And her hair not the least bit curled :
Yet for old sakes' sake she is still, dears,
The prettiest doll in the world.

What a silly song for a fairy to sing !
And what silly water-babies to be quite delighted at it !
Well, but you see they have not the advantage of Aunt
Agitate's Arguments in the sea-land down below.

"Now," said the fairy to Tom, "will you be a good
boy for my sake, and torment no more sea-beasts, till I
come back?"

"And you will cuddle me again?" said poor little
Tom.

"Of course I will, you little duck. I should like to
take you with me, and cuddle you all the way only I
must not;" and away she went.

So Tom really tried to be a good boy, and tormented
no sea-beasts after that, as long as he lived; and he is
quite alive, I assure you, still.

Oh, how good little boys ought to be, who have kind
pussy mammas to cuddle them and tell them stories; and
how afraid they ought to be of growing naughty, and
bringing tears into their mammas' pretty eyes !

CHAPTER VI.

"THOU little child, yet glorious in the might
Of heaven-born freedom on thy Being's height,
Why with such earnest pains dost thou provoke
The Years to bring the inevitable yoke—
Thus blindly with thy blessedness at strife?
Full soon thy soul shall have her earthly freight,
And custom lie upon thee with a weight
Heavy as frost, and deep almost as life."

WORDSWORTH.

HERE I come to the very saddest part of all my story. I know some people will only laugh at it, and call it much ado about nothing. But I know one man who would not; and he was an officer with a pair of gray moustaches as long as your arm, who said once in company, that two of the most heart-rending sights in the world, which moved him most to tears, which he would do anything to prevent or remedy, were a child over a broken toy, and a child stealing sweets.

The company did not laugh at him; his moustaches were too long and too gray for that: but, after he was gone, they called him sentimental, and so forth, all but one dear little old Quaker lady, with a soul as white as her cap, who was not, of course, generally partial to soldiers; and she said very quietly, like a Quaker:

"Friends, it is borne upon my mind that that is a truly brave man."

Now you may fancy that Tom was quite good, when he had everything that he could want or wish; but you would be very much mistaken. Being quite comfortable is a very good thing; but it does not make people good.

Indeed, it sometimes makes them naughty, as it has made the people in America ; and as it made the people in the Bible, who waxed fat and kicked, like horses overfed and underworked. And I am very sorry to say that this happened to little Tom. For he grew so fond of the sea-bull's-eyes and sea-lollipops, that his foolish little head could think of nothing else : and he was always longing for more, and wondering when the strange lady would come again and give him some, and what she would give him, and how much, and whether she would give him more than the others. And he thought of nothing but lollipops by day, and dreamt of nothing else by night,—and what happened then ?

That he began to watch the lady to see where she kept the sweet things ; and began hiding, and sneaking, and following her about, and pretending to be looking the other way, or going after something else, till he found out that she kept them in a beautiful mother-of-pearl cabinet, away in a deep crack of the rocks.

And he longed to go to the cabinet, and yet he was afraid ; and then he longed again, and was less afraid ; and at last, by continual thinking about it, he longed so violently, that he was not afraid at all. And one night, when all the other children were asleep, and he could not sleep for thinking of lollipops, he crept away among the rocks, and got to the cabinet, and behold ! it was open.

But, when he saw all the nice things inside, instead of being delighted, he was quite frightened, and wished he had never come there. And then he would only touch them, and he did ; and then he would only taste one, and he did ; and then he would only eat one, and he did ; and then he would only eat two, and then three, and so on ; and then he was terrified lest she should come and catch him, and began gobbling them down so fast that he did not taste them, or have any pleasure in

them ; and then he felt sick, and would have only one more ; and then only one more again ; and so on till he had eaten them all up.

And all the while, close behind him, stood Mrs. Bedonebyasyoudid.

Some people may say, but why did she not keep her cupboard locked ? Well, I know.—It may seem a very strange thing, but she never does keep her cupboard locked ; every one may go and taste for themselves, and fare accordingly. It is very odd, but so it is ; and I am quite sure that she knows best. Perhaps she wishes people to keep their fingers out of the fire, by having them burnt.

She took off her spectacles, because she did not like to see too much ; and in her pity she arched up her eyebrows into her very hair, and her eyes grew so wide that they would have taken in all the sorrows of the world, and filled with great big tears, as they too often do.

But all she said was :

“Ah, you poor little dear ! you are just like all the rest.”

But she said it to herself, and Tom neither heard nor saw her. Now, you must not fancy that she was sentimental at all. If you do, and think that she is going to let off you, or me, or any human being when we do wrong, because she is too tender-hearted to punish us, then you will find yourself very much mistaken, as many a man does every year and every day.

But what did the strange fairy do when she saw all her lollipops eaten ?

Did she fly at Tom, catch him by the scruff of the neck, hold him, howk him, hump him, hurry him, hit him, poke him, pull him, pinch him, pound him, put him in the corner, shake him, slap him, set him on a cold stone to reconsider himself, and so forth ?

Not a bit. You may watch her at work, if you know where to find her. But you will never see her do that. For, if she had, she knew quite well, Tom would have fought, and kicked, and bit, and said bad words, and turned again that moment into a naughty little heathen chimney-sweep, with his hand, like Ishmael's of old, against every man, and every man's hand against him.

Did she question him hurry him, frighten him, threaten him, to make him confess? Not a bit. You may see her, as I said, at her work often enough, if you know where to look for her; but you will never see her do that. For if she had, she would have tempted him to tell lies in his fright; and that would have been worse for him, if possible, than even becoming a heathen chimney-sweep again.

No. She leaves that for anxious parents and teachers (lazy ones, some call them), who instead of giving children a fair trial, such as they would expect and demand for themselves, force them by fright to confess their own faults,—which is so cruel and unfair, that no judge on the bench dare do it to the wickedest thief or murderer, for the good British law forbids it,—ay, and even punish them to make them confess, which is so detestable a crime, that it is never committed now, save by Inquisitors, and Kings of Naples, and a few other wretched people of whom the world is weary. And then they say, “We have trained up the child in the way he should go, and when he grew up he has departed from it. Why then did Solomon say that he would not depart from it.” But perhaps the way of beating, and hurrying, and frightening, and questioning, was not the way that the child should go; for it is not even the way in which a colt should go, if you want to break it in, and make it a quiet serviceable horse.

Some folks may say, “Ah! but the Fairy does not need

to do that, if she knows everything already." True. But if she did not know, she would not surely behave worse than a British judge and jury ; and no more should parents and teachers either.

So she just said nothing at all about the matter, not even when Tom came next day with the rest for sweet things. He was horribly afraid of coming ; but he was still more afraid of staying away, lest any one should suspect him. He was dreadfully afraid, too, lest there should be no sweets,—as was to be expected, he having eaten them all,—and lest then the fairy should inquire who had taken them. But, behold ! she pulled out just as many as ever, which astonished Tom, and frightened him still more.

And, when the fairy looked him full in the face, he shook from head to foot ; however, she gave him his share like the rest, and he thought within himself that she could not have found him out.

But, when he put the sweets into his mouth, he hated the taste of them ; and they made him so sick, that he had to get away as fast as he could ; and terribly sick he was, and very cross and unhappy, all the week after.

Then, when next week came, he had his share again ; and again the fairy looked him full in the face ; but more sadly than she had ever looked. And he could not bear the sweets ; but took them again in spite of himself.

And, when Mrs. Doasyouwouldbedoneby came, he wanted to be cuddled like the rest ; but she said, very seriously :

" I should like to cuddle you ; but I cannot, you are so horny and prickly."

And Tom looked at himself : and he was all over prickles, just like a sea-egg.

Which was quite natural ; for you must know and believe that people's souls make their bodies, just as a snail makes its shell (I am not joking, my little man ; I am in

serious, solemn earnest). And, therefore, when Tom's soul grew all prickly with naughty tempers, his body could not help growing prickly too, so that nobody would cuddle him, or play with him, or even like to look at him.

What could Tom do now, but go away and hide in a corner, and cry? For nobody would play with him, and he knew full well why.

And he was so miserable all that week that, when the ugly fairy came, and looked at him once more full in the face, more seriously and sadly than ever, he could stand it no longer, and thrust the sweetmeats away, saying, "No, I don't want any; I can't bear them now," and then burst out crying, poor little man, and told Mrs. Bedonebyasyoudid every word as it happened.

He was horribly frightened when he had done so; for he expected her to punish him very severely. But, instead, she only took him up and kissed him, which was not quite pleasant, for her chin was very bristly indeed; but he was so lonely-hearted, he thought that rough kissing was better than none.

"I will forgive you, little man," she said. "I always forgive every one the moment they tell me the truth of their own accord."

"Then you will take away all these nasty prickles?"

"That is a very different matter. You put them there yourself, and only you can take them away."

"But how can I do that?" asked Tom, crying afresh.

"Well, I think it is time for you to go to school; so I shall fetch you a schoolmistress, who will teach you how to get rid of your prickles." And so she went away.

Tom was frightened at the notion of a schoolmistress; for he thought she would certainly come with a birch-rod or a cane; but he comforted himself, at last, that she might be something like the old woman, in Vendale—which she was not in the least; for, when the fairy

brought her, she was the most beautiful little girl that ever was seen, with long curls floating behind her like a golden cloud, and long robes floating all round her like a silver one.

"There he is," said the fairy ; "and you must teach him to be good, whether you like or not."

"I know," said the little girl ; but she did not seem quite to like, for she put her finger in her mouth, and looked at Tom under her brows ; and Tom put his finger in his mouth, and looked at her under his brows, for he was horribly ashamed of himself.

The little girl seemed hardly to know how to begin ; and perhaps she would never have begun at all, if poor Tom had not burst out crying, and begged her to teach him to be good, and help him to cure his prickles ; and at that she grew so tender-hearted, that she began teaching him as prettily as ever child was taught in the world.

And what did the little girl teach Tom ? She taught him, first, what you have been taught ever since you said your first prayers at your mother's knees ; but she taught him much more simply. For the lessons in that world, my child, have no such hard words in them as the lessons in this, and therefore the water-babies like them better than you like your lessons, and long to learn them more and more ; and grown men cannot puzzle nor quarrel over their meaning, as they do here on land ; for those lessons all rise clear and pure, like the Test out of Overton Pool, out of the everlasting ground of all life and truth.

So she taught Tom every day in the week ; only on Sundays she always went away home, and the kind fairy took her place. And, before she had taught Tom many Sundays, his prickles had vanished quite away, and his skin was smooth and clean again.

"Dear me !" said the little girl ; "why, I know you

now. You are the very same chimney-sweep who came into my bedroom."

"Dear me!" cried Tom. "And I know you, too, now. You are the very little white lady whom I saw in bed." And he jumped at her and longed to hug and kiss her; but did not, remembering that she was a lady born; so he only jumped round and round her, till he was quite tired.

And then they began telling each other all their story,—how he had got into the water, and she had fallen over the rock; and how he had swam down to the sea, and how she had flown out of the window; and how this, that, and the other, till it was all talked out: and then they both began over again, and I can't say which of the two talked fastest.

And then they set to work at their lessons again, and both liked them so well, that they went on well till seven full years were past and gone.

You may fancy that Tom was quite content and happy all those seven years; but the truth is, he was not. He had always one thing on his mind, and that was—where little Ellie went, when she went home on Sundays.

To a very beautiful place, she said.

But what was the beautiful place like, and where was it?

Ah! that is just what she could not say. And it is strange, but true, that no one can say; and that those who have been oftenest in it, or even nearest to it, can say least about it, and make people understand least what it is like. There are a good many folks about the Other-end-of-Nowhere (where Tom went afterwards), who pretend to know it from north to south as well as if they had been penny-postmen there; but, as they are safe at the Other-end-of-Nowhere, nine hundred and ninety-nine million miles away, what they say cannot concern us.

But the dear, sweet, loving, wise, good, self-sacrificing

people, who really go there, can never tell you anything about it, save that it is the most beautiful place in all the world; and, if you ask them more, they grow modest, and hold their peace, for fear of being laughed at; and quite right they are.

So all that good little Ellie could say was, that it was worth all the rest of the world put together. And of course that only made Tom the more anxious to go likewise.

"Miss Ellie," he said, at last, "I will know why I cannot go with you when you go home, on Sundays, or I shall have no peace, and give you none either."

"You must ask the fairies that."

So when the fairy, Mrs. Bedonebyasyoudid, came next, Tom asked her.

"Little boys who are only fit to play with sea-beasts cannot go there," she said. "Those who go there must go first where they do not like, and do what they do not like, and help somebody they do not like."

"Why, did Ellie do that?"

"Ask her."

And Ellie blushed, and said, "Yes, Tom; I did not like coming here at first; I was so much happier at home, where it is always Sunday. And I was afraid of you, Tom, at first, because—because—"

"Because I was all over prickles? But I am not prickly now, am I, Miss Ellie?"

"No," said Ellie. "I like you very much now and I like coming here, too."

"And perhaps," said the fairy, "you will learn to like going where you don't like, and helping some one that you don't like, as Ellie has."

But Tom put his finger in his mouth, and hung his head down; for he did not see that at all.

So when Mrs. Doasyouwouldbedoneby came, Tom asked her; for he thought in his little head, she is not

so strict as her sister, and perhaps she may let me off more easily.

Ah, Tom, Tom, silly fellow ! and yet I don't know why I should blame you, while so many grown people have got the very same notion in their heads.

But, when they try it, they get just the same answer as Tom did. For, when he asked the second fairy, she told him just what the first did, and in the very same words.

Tom was very unhappy at that. And, when Ellie went home on Sunday, he fretted and cried all day, and did not care to listen to the fairy's stories about good children, though they were prettier than ever. Indeed, the more he overheard of them, the less he liked to listen, because they were all about children who did what they did not like, and took trouble for other people, and worked to feed their little brothers and sisters, instead of caring only for their play. And, when she began to tell a story about a holy child in old times, who was martyred by the heathen because it would not worship idols, Tom could bear no more, and ran away and hid among the rocks.

And, when Ellie came back, he was shy with her, because he fancied she looked down on him, and thought him a coward. And then he grew quite cross with her, because she was superior to him, and did what he could not do. And poor Ellie was quite surprised and sad ; and at last Tom burst out crying ; but he would not tell her what was really in his mind.

And all the while he was eaten up with curiosity to know where Ellie went to ; so that he began not to care for his playmates, or for the sea-palace, or anything else. But perhaps that made matters all the easier for him ; for he grew so discontented with everything round him, that he did not care to stay, and did not care where he went.

“ Well,” he said, at last, “ I am so miserable here, I’ll go ; if only you will go with me ? ”

“ Ah ! ” said Ellie, “ I wish I might ; but the worst of it is, that the fairy says, that you must go alone, if you go at all. Now don’t poke that poor crab about, Tom (for he was feeling very naughty and mischievous), or the fairy will have to punish you.”

Tom was very nearly saying, “ I don’t care if she does ; ” but he stopped himself in time.

“ I know what she wants me to do,” he said, whining most dolefully. “ She wants me to go after that horrid old Grimes. I don’t like him, that’s certain. And if I find him, he will turn me into a chimney sweep again, I know. That’s what I have been afraid of all along.”

“ No, he won’t,—I know as much as that. Nobody can turn water-babies into sweeps, or hurt them at all, as long as they are good.”

“ Ah,” said naughty Tom, “ I see what you want ; you are persuading me all along to go, because you are tired of me, and want to get rid of me.”

Little Ellie opened her eyes very wide at that, and they were all brimming over with tears.

“ Oh, Tom, Tom ! ” she said very mournfully—and then she cried, “ Oh, Tom ! where are you ? ”

And Tom cried, “ Oh, Ellie, where are you ? ”

For neither of them could see each other—not the least. Little Ellie vanished quite away, and Tom heard her voice calling him, and growing smaller and smaller and fainter and fainter, till all was silent.

Who was frightened then but Tom ? He swam up and down among the rocks, into all the halls and chambers, faster than ever he swam before, but could not find her. He shouted after her, but she did not answer ; he asked all the other children, but they had not seen her ; and at last he went up to the top of the water and began crying

and screaming for Mrs. Doasyouwouldbedoneby, but she did not come. Then he began crying and screaming for Mrs. Bedonebyasyoudid—which perhaps was the best thing to do—for she came in a moment.

“Oh !” said Tom. “Oh dear, oh dear ! I have been naughty to Ellie, and I have killed her—I know I have killed her.”

“Not quite that,” said the fairy ; “but I have sent her away home, and she will not come back again for I do not know how long.”

And at that Tom cried so bitterly, that the salt sea was swelled with his tears, and the tide was 3,954,620,819 of an inch higher than it had been the day before : but perhaps that was owing to the waxing of the moon. It may have been so ; but it is considered right in the new philosophy, you know, to give spiritual causes for physical phenomena—especially in parlor-tables ; and, of course, physical causes for spiritual ones, like thinking, and praying, and knowing right from wrong. And so they odds it till it comes even, as folks say down in Berkshire.

“How cruel of you to send Ellie away !” sobbed Tom. “However, I will find her again, if I go to the world’s end to look for her.”

The fairy did not slap Tom, and tell him to hold his tongue ; but she took him on her lap very kindly, just as her sister would have done ; and put him in mind how it was not her fault, because she was wound up inside, like watches, and could not help doing things whether she liked or not. And then she told him how he had been in the nursery long enough, and must go out now and see the world, if he intended ever to be a man ; and how he must go all alone by himself, as every one else that ever was born has to go, and see with his own eyes, and smell with his own nose, and make his own bed and lie on it, and burn his own fingers if he put them into the fire.

And then she told him how many fine things there were to be seen in the world, and what an odd, curious, pleasant, orderly, respectable, well-managed, and, on the whole, successful (as, indeed, might have been expected) sort of a place it was, if people would only be tolerably brave and honest and good in it; and then she told him not to be afraid of anything he met, for nothing would harm him if he remembered all his lessons, and did what he knew was right. And at last she comforted poor little Tom so much, that he was quite eager to go, and wanted to set out that minute. "Only," he said, "if I might see Ellie once before I went!"

"Why do you want that?"

"Because—because I should be so much happier if I thought she had forgiven me."

And in the twinkling of an eye there stood Ellie, smiling, and looking so happy that Tom longed to kiss her; but was still afraid it would not be respectful, because she was a lady born.

"I am going, Ellie!" said Tom. "I am going, if it is to the world's end. But I don't like going at all, and that's the truth."

"Pooh! pooh! pooh!" said the fairy. "You will like it very well indeed, you little rogue, and you know that at the bottom of your heart. But if you don't I will make you like it. Come here, and see what happens to people who do only what is pleasant."

And she took out of one of her cupboards (she had all sorts of mysterious cupboards in the cracks of the rocks) the most wonderful waterproof book, full of such photographs as never were seen. For she had found out photography (and this is a fact) more than 13,598,000 years before anybody was born; and, what is more, her photographs did not merely represent light and shade, as ours do, but color also, and all colors, as you may see if you

look at a black cock's tail, or a butterfly's wing, or, indeed, most things that are or can be, so to speak. And, therefore, her photographs were very curious and famous, and the children looked with great delight for the opening of the book.

And on the title-page was written, "The History of the great and famous nation of the Doasyoulikes, who came away from the country of Hardwork, because they wanted to play on the Jews'-harp all day long."

In the first picture they saw these Doasyoulikes living in the land of Readymade, at the foot of the Happygolucky Mountains, where flapdoodle grows wild; and if you want to know what that is, you must read Peter Simple.

They lived very much such a life as those jolly old Greeks in Sicily, whom you may see painted on the ancient vases, and really there seemed to be great excuses for them, for they had no need to work.

Instead of houses, they lived in the beautiful caves of tufa, and bathed in the warm springs three times a day; and, as for clothes, it was so warm there that the gentlemen walked about in little beside a cocked hat and a pair of straps, or some light summer tackle of that kind; and the ladies all gathered gossamer in autumn (when they were not too lazy) to make their winter dresses.

They were very fond of music, but it was too much trouble to learn the piano or the violin; and, as for dancing, that would have been too great an exertion. So they sat on ant-hills all day long, and played on the Jews'-harp; and, if the ants bit them, why they just got up and went to the next ant-hill, till they were bitten there likewise.

And they sat under the flapdoodle-trees, and let the flapdoodle drop into their mouths; and under the vines, and squeezed the grape-juice down their throats; and, if any little pigs ran about ready roasted, crying, "Come and eat

me," as was their fashion in that country, they waited till the pigs ran against their mouths, and then took a bite and were content, just as so many oysters would have been.

They needed no weapons, for no enemies ever came near their land ; and no tools, for everything was ready-made to their hand ; and the stern old fairy Necessity never came near them to hunt them up, and make them use their wits, or die.

And so on, and so on, and so on, till there were never such comfortable, easy-going, happy-go-lucky people in the world.

"Well, that is a jolly life," said Tom.

"You think so?" said the fairy. "Do you see that great peaked mountain there behind," said the fairy, "with smoke coming out of its top?"

"Yes."

"And do you see all those ashes, and slag, and cinders, lying about?"

"Yes."

"Then turn over the next five hundred years, and you will see what happens next."

And behold the mountain had blown up like a barrel of gunpowder, and then boiled over like a kettle : whereby one third of the Doasyoulikes were blown into the air, and another third were smothered in ashes ; so that there was only one third left.

"You see," said the fairy, "what comes of living on a burning mountain."

"Oh, why did you not warn them?" said little Ellie.

"I did warn them all that I could. I let the smoke come out of the mountain ; and wherever there is smoke there is fire. And I laid the ashes and cinders all about ; and wherever there are cinders, cinders may be again. But they did not like to face facts, my dears, as very few

people do ; and so they invented a cock-and-bull story, which, I am sure, I never told them, that the smoke was the breath of a giant, whom some gods or other had buried under the mountain ; and that the cinders were what the dwarfs roasted the little pigs whole with ; and other nonsense of that kind. And, when folks are in that humor, I cannot teach them, save by the good old birch-rod."

And then she turned over the next five hundred years : and there were the remnant of the Doasyoulikes, doing as they liked, as before. They were too lazy to move away from the mountain ; so they said, If it has blown up once, that is all the more reason that it should not blow up again. And they were few in number : but they only said, The more the merrier, but the fewer the better fare. However, that was not quite true ; for all the flapdoodle-trees were killed by the volcano, and they had eaten all the roast pigs, who, of course, could not be expected to have little ones. So they had to live very hard, on nuts and roots which they scratched out of the ground with sticks. Some of them talked of sowing corn, as their ancestors used to do, before they came into the land of Readymade ; but they had forgotten how to make ploughs, (they had forgotten even how to make Jews'-harps by this time,) and had eaten all the seed-corn which they brought out of the land of Hardwork years since ; and of course it was too much trouble to go away and find more. So they lived miserably on roots and nuts, and all the weakly little children had great stomachs, and then died.

"Why," said Tom, "they are growing no better than savages."

"And look how ugly they are all getting," said Ellie.

"Yes ; when people live on poor vegetables instead of roast beef and plum-pudding, their jaws grow large, and

their lips grow coarse, like the poor paddies who eat potatoes."

And she turned over the next five hundred years. And there they were all living up in trees, and making nests to keep off the rain. And underneath the trees lions were prowling about.

"Why," said Ellie, "the lions seem to have eaten a good many of them, for there are very few left now."

"Yes," said the fairy; "you see it was *only* the strongest and most active ones who could climb the trees, and so escape."

"But what great hulking, broad-shouldered chaps they are," said Tom; "they are a rough lot as ever I saw."

"Yes, they are getting very strong now; for the ladies will not marry any but the very strongest and fiercest gentlemen, who can help them up the trees and out of the lions' way."

And she turned over the next five hundred years. And in that they were fewer still, and stronger, and fiercer; but their feet had changed shape very oddly, for they laid hold of the branches with their great toes, as if they had been thumbs, just as a Hindoo tailor uses his toes to thread his needle.

The children were very much surprised, and asked the fairy whether that was her doing.

"Yes, and no," she said, smiling. "It was only those who could use their feet as well as their hands who could get a good living, or indeed, get married; so that they got the best of everything, and starved out all the rest; and those who are left keep up a regular breed of toe-thumb-men, as a breed of shorthorns, or skye-terriers, or fancy pigeons is kept up."

"But there is a hairy one among them," said Ellie.

"Ah!" said the fairy, "that will be a great man in his time, and chief of all the tribe."

And, when she turned over the next five hundred years, it was true.

For this hairy chief had had hairy children, and they hairier children still ; and every one wished to marry hairy husbands, and have hairy children too ; for the climate was growing so damp that none but the hairy ones could live : all the rest coughed and sneezed, and had sore throats, and went into consumptions, before they could grow up to be men and women.

Then the fairy turned over the next five hundred years. And they were fewer still.

"Why, there is one on the ground picking up roots," said Ellie, "and he cannot walk upright."

No more he could ; for in the same way that the shape of their feet had altered, the shape of their backs had altered also.

"Why," cried Tom, "I declare they are all apes."

"Something fearfully like it, poor foolish creatures," said the fairy. "They are grown so stupid now, that they can hardly think : for none of them have used their wits for many hundred years. They have almost forgotten, too, how to talk. For each stupid child forgot some of the words it heard from its stupid parents, and had not wits enough to make fresh words for itself. Besides they are grown so fierce and suspicious and brutal that they keep out of each other's way, and mope and sulk in the dark forests, never hearing each other's voice, till they have forgotten almost what speech is like. I am afraid they will all be apes very soon, and all by doing only what they liked."

And in the next five hundred years they were all dead and gone, by bad food and wild beasts and hunters ; all except one tremendous old fellow with jaws like a jack, who stood full seven feet high ; and M. Du Chaillu came up to him, and shot him, as he stood roaring and thump-

ing his breast. And he remembered that his ancestors had once been men, and tried to say, "Am I not a man and a brother?" but had forgotten how to use his tongue; and then he had tried to call for a doctor, but he had forgotten the word for one. So all he said was, "Ubboboo!" and died.

And that was the end of the great and jolly nation of the Doasyoulikes. And, when Tom and Ellie came to the end of the book, they looked very sad and solemn; and they had good reason so to do, for they really fancied that the men were apes, and never thought, in their simplicity, of asking whether the creatures had hippopotamus majors in their brains or not; in which case, as you have been told already, they could not possibly have been apes, though they were more apish than the apes of all aeries.

"But could you not have saved them from becoming apes!" said little Ellie, at last.

"At first, my dear; if only they would have behaved like men, and set to work to do what they did not like. But the longer they waited, and behaved like the dumb beasts, who only do what they like, the stupider and clumsier they grew; till at last they were past all cure, for they had thrown their own wits away. It is such things as this that help to make me so ugly, that I know not when I shall grow fair."

"And where are they all now?" asked Ellie.

"Exactly where they ought to be, my dear.

"Yes!" said the fairy, solemnly, half to herself, as she closed the wonderful book. "Folks say now that I can make beasts into men, by circumstance, and selection, and competition, and so forth. Well, perhaps they are right; and perhaps, again, they are wrong. That is one of the seven things which I am forbidden to tell, till the coming of the Cocqsigruess; and, at all events, it is no

concern of theirs. Whatever their ancestors were, men they are ; and I advise them to behave as such, and act accordingly. But let them recollect this, that there are two sides to every question, and a downhill as well as an uphill road ; and, if I can turn beasts into men, I can, by the same law of circumstance, and selection, and competition, turn men into beasts. You were very near being turned into a beast once or twice, little Tom. Indeed, if you had not made up your mind to go on this journey, and see the world, like an Englishman, I am not sure but that you would have ended as an eel in a pond."

"Oh, dear me?" said Tom ; "sooner than that, and be all over slime, I'll go this minute, if it is to the world's end."

CHAPTER VII.

‘AND Nature, the old Nurse, took
 The child upon her knee,
 Saying, ‘ Here is a story-book
 Thy father hath written for thee.

Come wander with me,’ she said,
 ‘ Into regions yet untrod,
 And read what is still unread
 In the Manuscripts of God.’

And he wandered away and away
 With Nature, the dear old Nurse,
 Who sang to him night and day
 The rhymes of the universe.”

LONGFELLOW.

“Now,” said Tom, “I am ready to be off, if it’s to the world’s end.”

“Ah!” said the fairy, “that is a brave, good boy. But you must go further than the world’s end, if you want to find Mr. Grimes; for he is at the Other-end-of-Nowhere. You must go to Shiny Wall, and through the white gate that never was opened; and then you will come to Peace-pool, and Mother Carey’s Haven, where the good whales go when they die. And there Mother Carey will tell you the way to the Other-end-of-Nowhere, and there you will find Mr. Grimes.”

“Oh, dear!” said Tom. “But I do not know my way to Shiny Wall, or where it is at all.”

“Little boys must take the trouble to find out things for themselves, or they will never grow to be men; so that you must ask all the beasts in the sea and the birds in the

air, and if you have been good to them, some of them will tell you the way to Shiny Wall."

"Well," said Tom, "it will be a long journey, so I had better start at once. Good-bye, Miss Ellie; you know I am getting a big boy, and I must go out and see the world."

"I know you must," said Ellie; "but you will not forget me, Tom. I shall wait here till you come."

And she shook hands with him and bade him good-bye. Tom longed very much again to kiss her; but he thought it would not be respectful, considering she was a lady born; so he promised not to forget her: but his little whirl-about of a head was so full of the notion of going out to see the world, that it forgot her in five minutes: however, though his head forgot her I am glad to say his heart did not.

So he asked all the beasts in the sea, and all the birds in the air, but none of them knew the way to Shiny Wall. For why? He was still too far down south.

Then he met a ship, far larger than he had ever seen—a gallant ocean-steamer, with a long cloud of smoke trailing behind; and he wondered how she went on without sails, and swam up to her to see. A shoal of dolphins were running races round and round her, going three feet for her one, and Tom asked them the way to Shiny Wall; but they did not know. Then he tried to find out how she moved, and at last he saw her screw, and was so delighted with it that he played under her quarter all day, till he nearly had his nose knocked off by the fans, and thought it time to move. Then he watched the sailors upon deck, and the ladies, with their bonnets and parasols: but none of them could see him, because their eyes were not opened—as, indeed, most people's eyes are not.

At last there came out into the quarter-gallery a very pretty lady, in deep black widow's weeds, and in her

arms a baby. She leaned over the quarter-gallery, and looked back and back toward England far away ; and as she looked she sang :—

I.

“Soft, soft wind, from out the sweet south sliding,
Waft thy silver cloud-webs athwart the summer sea ;
Thin, thin threads of mist on dewy fingers twining,
Weave a veil of dappled gauze to shade my babe and me.

II.

“Deep, deep Love, within thine own abyss abiding,
Pour Thyself abroad, O Lord, on earth and air and sea ;
Worn weary hearts within Thy holy temple hiding,
Shield from sorrow, sin, and shame my helpless babe and me.”

Her voice was so soft and low, and the music of the air so sweet, that Tom could have listened to it all day. But as she held the baby over the gallery-rail, to show it the dolphins leaping and the water gurgling in the ship's wake, lo ! and behold, the baby saw Tom.

He was quite sure of that ; for when their eyes met, the baby smiled and held out its hands ; and Tom smiled and held out his hands too ; and the baby kicked and leaped, as if it wanted to jump overboard to him.

“What do you see, my darling ?” said the lady ; and her eyes followed the baby's till she too caught sight of Tom, swimming about among the foam-beads below.

She gave a little shriek and start ; and then she said, quite quietly, “Babies in the sea? Well, perhaps it is the happiest place for them,” and waved her hand to Tom, and cried, “Wait a little, darling, only a little : and perhaps we shall go with you and be at rest.”

And at that an old nurse, all in black, came out and talked to her, and drew her in. And Tom turned away northward, sad and wondering ; and watched the great steamer slide away into the dusk, and the lights on board

peep out one by one, and die out again, and the long bar of smoke fade away into the evening mist, till all was out of sight.

And he swam northward again, day after day, till at last he met the King of the Herrings, with a curryscomb growing out of his nose, and a sprat in his mouth for a cigar, and asked him the way to Shiny Wall ; so he bolted his sprat head-foremost, and said,--

"If I were you, young gentleman, I should go to the Allalonestone, and ask the last of the Gairfowl. She is of a very ancient clan, very nearly as ancient as my own ; and knows a good deal which these modern upstarts don't, as ladies of old houses are likely to do."

Tom asked his way to her, and the King of the Herrings told him very kindly ; for he was a courteous old gentleman of the old school, though he was horribly ugly, and strangely bedizened too, like the old dandies who lounge in the club-house windows.

But just as Tom had thanked him and set off, he called after him : "Hi ! I say, can you fly?"

"I never tried," says Tom. "Why?"

"Because, if you can, I should advise you to say nothing to the old lady about it. There ; take a hint. Good-bye."

And away Tom went for seven days and seven nights due northwest, till he came to a great cod-bank, the like of which he never saw before. The great cod lay below in tens of thousands, and gobbled shell-fish all day long ; and the blue sharks roved above in hundreds, and gobbled them when they came up. So they ate, and ate, and ate each other, as they had done since the making of the world ; for no man had come here yet to catch them, and find out how rich old Mother Carey is.

And there he saw the last of the Gairfowl, standing up on the Allalonestone, all alone. And a very grand old

lady she was, full three feet high, and bolt upright, like some old Highland chieftainess. She had on a black velvet gown, and a white pinner and apron, and a very high bridge to her nose (which is a sure mark of high breeding), and a large pair of white spectacles on it, which made her look rather odd but it was the ancient fashion of her house.

And instead of wings, she had two little feathery arms, with which she fanned herself, and complained of the dreadful heat ; and she kept on crooning an old song to herself, which she learnt when she was a little baby-bird, long ago :—

“Two little birds, they sat on a stone,
One swam away, and then there was one ;
With a fal-lal-la-lady.

“The other swam after, and there was none,
And so the poor stone was left all alone ;
With a fal-lal-la-lady.”

It was “flew” away, properly, and not “swam” away : but, as she could not fly, she had a right to alter it. However, it was a very fit song for her to sing, because she was a lady herself.

Tom came up to her very humbly, and made his bow ; and the first thing she said was,—

“Have you wings? Can you fly?”

“Oh dear, no, ma’am ; I should not think of such a thing,” said cunning little Tom.

“Then I shall have great pleasure in talking to you, my dear. It is quite refreshing nowadays to see anything without wings. They must all have wings, forsooth, now, every new upstart sort of bird and fly. What can they want with flying, and raising themselves above their proper station in life ! In the days of my ancestors no birds ever thought of having wings, and did

very well without ; and now they all laugh at me because I keep to the good old fashion. Why, the very marrocks and dovebies have got wings, the vulgar creatures, and poor little ones enough they are ; and my own cousins too, the razor-bills, who are gentlefolk born, and ought to know better than to ape their inferiors."

And so she was running on, while Tom tried to get in a word edgeways ; and at last he did, when the old lady got out of breath, and began fanning herself again ; and then he asked if she knew the way to Shiny Wall.

"Shiny Wall? Who should know better than I? We all came from Shiny Wall, thousands of years ago, when it was decently cold, and the climate was fit for gentlefolk ; but now, what with the heat, and what with these vulgar-winged things who fly up and down and eat everything, so that gentlepeople's hunting is all spoilt, and one really cannot get one's living, or hardly venture off the rock for fear of being flown against by some creature that would not have dared to come within a mile of one a thousand years ago,—what was I saying? Why, we have quite gone down in the world, my dear, and have nothing left but our honor. And I am the last of my family. A friend of mine and I came and settled on this rock when we were young, to be out of the way of low people. Once we were a great nation, and spread over all the Northern Isles. But men shot us so, and knocked us on the head, and took our eggs,—why, if you will believe it, they say that on the coast of Labrador the sailors used to lay a plank from the rock on board the thing they called their ship, and drive us along the plank by hundreds, till we tumbled down into the ship's waist in heaps ; and then, I suppose, they ate us, the nasty fellows ! Well—but—what was I saying? At last there were none of us left, except on the old Gairfowlskerry, just off the Iceland coast, up which no man could climb. Even there we had

no peace ; for one day, when I was quite a young girl, the land rocked, and the sea boiled, and the sky grew dark, and all the air was filled with smoke and dust, and down tumbled the old Gairfowlskerry into the sea. The dovekies and marrocks, of course, all flew away ; but we were too proud to do that. Some of us were dashed to pieces, and some drowned ; and those who were left got away to Eldey, and the dovekies tell me they are all dead now, and that another Gairfowlskerry has risen out of the sea close to the old one, but that it is such a poor flat place that it is not safe to live on : and so here I am left alone."

This was the Gairfowl's story, and, strange as it may seem, it is every word of it true.

"If you only had had wings !" said Tom ; "then you might all have flown away too."

"Yes, young gentleman : and if people are not gentlemen and ladies, and forget that *noblesse oblige*, they will find it as easy to get on in the world as other people who don't care what they do. Why, if I had not recollected that *noblesse oblige*, I should not have been all alone now." And the poor old lady sighed.

"How was that, ma'am ?"

"Why, my dear, a gentleman came hither with me, and after we had been here some time, he wanted to marry,—in fact, he actually proposed to me. Well, I can't blame him ; I was young, and very handsome then, I don't deny ; but you see, I could not hear of such a thing, because he was my deceased sister's husband, you see ?"

"Of course not, ma'am," said Tom ; though, of course, he knew nothing about it. "She was very much diseased, I suppose ?"

"You do not understand me, my dear. I mean, that being a lady, and with right and honorable feelings, as

our house always has had, I felt it my duty to snub him, and howk him, and peck him continually, to keep him at his proper distance ; and, to tell the truth, I once pecked him a little too hard, poor fellow, and he tumbled backwards off the rock, and—really, it was very unfortunate, but it was not my fault—a shark coming by saw him flapping, and snapped him up. And since then I have lived all alone—

With a fal-lal-la-lady.

And soon I shall be gone, my little dear, and nobody will miss me ; and then the poor stone will be left all alone.”

“But, please, which is the way to Shiny Wall?” said Tom.

“Oh, you must go, my little dear—you must go. Let me see—I am sure—that is—really, my poor old brains are getting quite puzzled. Do you know, my little dear, I am afraid, if you want to know, you must ask some of these vulgar birds about, for I have quite forgotten.”

And the poor old Gairfowl began to cry tears of pure oil ; and Tom was quite sorry for her ; and for himself too, for he was at his wit's end whom to ask.

But by there came a flock of petrels, who are Mother Carey's own chickens ; and Tom thought them much prettier than Lady Gairfowl, and so perhaps they were ; for Mother Carey had had a great deal of fresh experience between the time that she invented the Gairfowl and the time that she invented them. They flitted along like a flock of black swallows, and hopped and skipped from wave to wave, lifting up their little feet behind them so daintily, and whistling to each other so tenderly, that Tom fell in love with them at once, and called them to know the way to Shiny Wall.

“Shiny Wall? Do you want Shiny Wall? Then

come with us, and we will show you. We are Mother Carey's own chickens, and she sends us out over all the seas, to show the good birds the way home."

Tom was delighted, and swam off to them, after he had made his bow to the Gairfowl. But she would not return his bow : but held herself bolt upright, and wept tears of oil as she sang :

" And so the poor stone was left all alone ;
With a fal-lal-la-lady."

But she was wrong there ; for the stone was not left all alone : and the next time that Tom goes by it, he will see a sight worth seeing.

The old Gairfowl is gone already : but there are better things come in her place ; and when Tom comes he will see the fishing-smacks anchored there in hundreds, from Scotland, and from Ireland, and from the Orkneys, and the Shetlands, and from all the Northern ports, full of the children of the old Norse Vikings, the masters of the sea. And the men will be hauling in the great cod by thousands, till their hands are sore from the lines ; and they will be making cod-liver oil and guano, and salting down the fish ; and there will be a man-of-war steamer there to protect them, and a lighthouse to show them the way ; and you and I, perhaps, shall go some day to the Allalonestone to the great summer sea-fair, and dredge strange creatures such as man never saw before ; and we shall hear the sailors boast that it is not the worst jewel in Queen Victoria's crown, for there are eighty miles of codbank, and food for all the poor folk in the land. That is what Tom will see, and perhaps you and I shall see it too. And then we shall not be sorry because we cannot get a gairfowl to stuff, much less find gairfowl enough to drive them into stone pens and slaughter them, as the old Norsemen did, or drive them

on board along a plank till the ship was victualled with them, as the old English and French rovers used to do, of whom dear old Hakluyt tells : but we shall remember what Mr. Tennyson says, how

“ The old order changeth, giving place to the new,
And God fulfills Himself in many ways.”

And now Tom was all agog to start for Shiny Wall ; but the petrels said no. They must go first to Allfowlsness, and wait there for the great gathering of all the sea-birds, before they start for their summer breeding places far away in the Northern isles ; and there they would be sure to find some birds which were going to Shiny Wall : but where Allfowlsness was, he must promise never to tell, lest men should go there and shoot the birds, and stuff them, and put them into stupid museums, instead of leaving them to play and breed and work in Mother Carey's water-garden, where they ought to be.

So where Allfowlsness is nobody must know ; and all that is to be said about it is, that Tom waited there many days ; and as he waited, he saw a very curious sight. On the rabbit burrows on the shore there gathered hundreds and hundreds of hoodiecrows, such as you see in Cambridgeshire. And they made such a noise, that Tom came on shore and went up to see what was the matter.

And there he found them holding their great caucus, which they hold every year in the North ; and all their stump-orators were speechifying ; and for a tribune, the speaker stood on an old sheep's skull.

And they cawed and cawed, and boasted of all the clever things they had done ; how many lambs' eyes they had picked out, and how many dead bullocks they had eaten, and how many young grouse they had swallowed whole, and how many grouse-eggs they had flown away with, stuck on the point of their bills, which is the hoodiecrow's

particularly clever feat, of which he is as proud as a gypsy is of doing the hokany-baro ; and what that is, I won't tell you.

And at last they brought out the prettiest, neatest young lady-crow that ever was seen, and set her in the middle, and all began abusing and vilifying, and rating, and bullyragging at her, because she had stolen no grouse-eggs, and had actually dared to say that she would not steal any. So she was to be tried publicly by their laws (for the hoodies always try some offenders in their great yearly parliament). And there she stood in the middle, in her black gown and gray hood, looking as meek and as neat as a Quakeress, and they all bawled at her at once.

And it was in vain that she pleaded

That she did not like grouse-eggs ;

That she could get her living very well without them ;

That she was afraid to eat them, for fear of the gamekeepers ;

That she had not the heart to eat them, because the grouse were such pretty, kind jolly birds ;

And a dozen reasons more.

For all the other scaul-crows set upon her, and pecked her to death there and then, before Tom could come to help her ; and then flew away, very proud of what they had done,

Now, was not this a scandalous transaction ?

But they are true republicans, these hoodies, who do every one just what he likes, and make other people do so too ; so that, for any freedom of speech, thought, or action, which is allowed among them, they might as well be American citizens of the new school.

But the fairies took the good crow, and gave her nine new sets of feathers running, and turned her at last into the most beautiful bird of paradise with a green velvet suit

and a long tail, and sent her to eat fruit in the Spice Islands, where cloves and nutmegs grow.

And Mrs. Bedonebyasyoudid settled her account with the wicked hoodies. For as they flew away, what should they find but a nasty dead dog?—on which they all set to work, pecking and gobbling and cawing and quarrelling, to their hearts' content. But the moment afterwards, they all threw up their bills into the air, and gave one screech; and then turned head-over-heels backward, and fell down dead, one hundred and twenty-three of them at once. For why? The fairy had told the gamekeeper in a dream to fill the dead dog full of strychnine; and so he did.

And after a while the birds began to gather at Allfowlsness, in thousands and tens of thousands, blackening all the air; swans and brant geese, harlequins and eiders, harelds and garganeys, smews and goosanders, divers and loons, grebes and dovebies, auks and razorbills, gannets and petrels, skuas and terns, with gulls beyond all naming or numbering; and they paddled and washed and splashed and combed and brushed themselves on the sand, till the shore was white with feathers; and they quacked and clucked and gabbled and chattered and screamed and hooped as they talked over matters with their friends, and settled where they were to go and breed that summer, till you might have heard them ten miles off; and lucky it was for them that there was no one to hear them but the old keeper, who lived all alone upon the Ness, in a turf hut thatched with heather and fringed round with great stones slung across the roof by bent-ropes, lest the winter gales should blow the hut right away. But he never minded the birds nor hurt them, because they were not in season: indeed, he minded but two things in the whole world, and those were, his Bible and his grouse; for he was as good an old Scotchman as ever knit stockings on a winter's night: only, when all the birds were going,

he toddled out, and took off his cap to them, and wished them a merry journey and a safe return ; and then gathered up all the feathers which they had left, and cleaned them to sell down south, and make feather-beds for stuffy people to lie on.

Then the petrels asked this bird and that whether they would take Tom to Shiny Wall ; but one set was going to Sutherland, and one to the Shetlands, and one to Norway, and one to Spitzbergen, and one to Iceland, and one to Greenland : but none would go to Shiny Wall. So the good-natured petrels said that they would show him part of the way themselves, but they were only going as far as Jan Mayen's land ; and after that he must shift for himself.

And then all the birds rose up, and streamed away in long black lines, north, and northeast, and northwest, across the bright blue summer sky ; and their cry was like ten thousand packs of hounds, and ten thousand peals of bells. Only the puffins stayed behind, and killed the young rabbits, and laid their eggs in the rabbit-burrows ; which was rough practice, certainly : but a man must see to his own family.

And, as Tom and the petrels went northeastward, it began to blow right hard ; for the old gentleman in the gray great-coat, who looks after the big copper boiler in the Gulf of Mexico, had got behind-hand with his work ; so Mother Carey had sent an electric message to him for more steam ; and now the steam was coming, as much in an hour as ought to have come in a week, puffing and roaring and swishing and swirling, till you could not see where the sky ended and the sea began. But Tom and the petrels never cared, for the gale was right abaft, and away they went over the crests of the billows, as merry as so many flying fish.

And at last they saw an ugly sight—the black side of

a great ship, water-logged in the trough of the sea. Her funnel and her masts were overboard, and swayed and surged under her lee ; her decks were swept as clean as a barn-floor, and there was no living soul on board.

The petrels flew up to her, and wailed round her ; for they were very sorry indeed, and also they expected to find some salt pork ; and Tom scrambled on board of her and looked round, frightened and sad.

And there, in a little cot, lashed tight under the bulwark, lay a baby fast asleep ; the very same baby, Tom saw at once, which he had seen in the singing lady's arms.

He went up to it, and wanted to wake it : but behold, from under the cot out jumped a little black and tan terrier dog, and began barking and snapping at Tom, and would not let him touch the cot.

Tom knew the dog's teeth could not hurt him : but at least it could shove him away, and did ; and he and the dog fought and struggled, for he wanted to help the baby, and did not want to throw the poor dog overboard : but, as they were struggling, there came a tall green sea, and walked in over the weather side of the ship, and swept them all into the waves.

"Oh, the baby, the baby !" screamed Tom : but the next moment he did not scream at all ; for he saw the cot settling down through the green water, with the baby smiling in it, fast asleep ; and he saw the fairies come up from below, and carry baby and cradle gently down in their soft arms ; and then he knew it was all right, and that there would be a new water-baby in St. Brandan's Isle.

And the poor little dog ?

Why, after he had kicked and coughed a little, he sneezed so hard that he sneezed himself clean out of his skin, and turned into a water-dog, and jumped and

danced round Tom, and ran over the crests of the waves, and snapped at the jelly-fish and the mackerel, and followed Tom the whole way to the Other-end-of-Nowhere.

Then they went on again, till they began to see the peak of Jan Mayen's Land, standing up like a white sugar-loaf, two miles above the clouds.

And there they fell in with a whole flock of molly-mocks, who were feeding on a dead whale.

"These are the fellows to show you the way," said Mother Carey's chickens; "we cannot help you further north. We don't like to get among the ice pack, for fear it should nip our toes; but the mollys dare fly anywhere."

So the petrels called to the mollys: but they were so busy and greedy, gobbling and pecking and spluttering and fighting over the blubber, that they did not take the least notice.

"Come, come," said the petrels, "you lazy greedy lubbers, this young gentleman is going to Mother Carey, and if you don't attend on him, you won't earn your discharge from her, you know."

"Greedy we are," says a great fat old molly, "but lazy we a'n't; and, as for lubbers, we're no more lubbers than you. Let's have a look at the lad."

And he flapped right into Tom's face, and stared at him in the most impudent way (for the mollys are audacious fellows, as all whalers know), and then asked him where he hailed from, and what land he sighted last.

And, when Tom told him, he seemed pleased, and said he was a good plucked one to have got so far.

"Come along, lads," he said to the rest, "and give this little chap a cast over the pack, for Mother Carey's sake. We've eaten blubber enough for to-day, and we'll e'en work out a bit of our time by helping the lad."

So the mollys took Tom up on their backs, and flew off

with him, laughing and joking—and oh, how they did smell of train oil!

“Who are you, you jolly birds?” asked Tom.

“We are the spirits of the old Greenland skippers (as every sailor knows), who hunted here, right whales and horse-whales, full hundreds of years ago. But, because we were saucy and greedy, we were all turned into mollys, to eat whale’s blubber all our days. But lubbers we are none, and could sail a ship now against any man in the North Seas, though we don’t hold with this new-fangled steam. And it’s a shame of those black imps of petrels to call us so; but because they’re her grace’s pets, they think they may say anything they like.”

“And who are you?” asked Tom of him, for he saw that he was the king of all the birds.

“My name is Hendrick Hudson, and a right good skipper was I; and my name will last to the world’s end, in spite of all the wrong I did. For I discovered Hudson River, and I named Hudson’s Bay; and many have come in my wake that dared not have shown me the way. But I was a hard man in my time, that’s truth, and stole the poor Indians off the coast of Maine, and sold them for slaves down in Virginia; and at last I was so cruel to my sailors, here in these very seas, that they set me adrift in an open boat, and I never was heard of more. So now I’m the king of all the mollys, till I’ve worked out my time.”

And now they came to the edge of the pack, and beyond it they could see Shiny Wall looming, through mist, and snow, and storm. But the pack rolled horribly upon the swell, and the ice giants fought and roared, and leapt upon each other’s backs, and ground each other to powder, so that Tom was afraid to venture among them, lest he should be ground to powder too. And he was the more afraid, when he saw lying among the ice pack the wrecks of many a gallant ship; some with masts and

yards all standing, some with the seamen frozen fast on board. A'as, alas, for them ! They were all true English hearts ; and they came to their end like good knights-errant, in searching for the white gate that never was opened yet.

But the good mollys took Tom and his dog up, and flew with them safe over the pack and the roaring ice giants, and set them down at the foot of Shiny Wall.

"And where is the gate?" asked Tom.

"There is no gate," said the mollys.

"No gate?" cried Tom aghast.

"None ; never a crack of one, and that's the whole of the secret, as better fellows, lad, than you have found to their cost ; and if there had been, they'd have killed by now every right whale that swims the sea."

"What am I to do, then?"

"Dive under the floe, to be sure, if you have pluck."

"I've not come so far to turn now," said Tom ; "so here goes for a header."

"A lucky voyage to you, lad," said the mollys ; "we knew you were one of the right sort. So, good-bye."

"Why don't you come too?" asked Tom.

But the mollys only wailed sadly, "We can't go yet, we can't go yet," and flew away over the pack.

So Tom dived under the great white gate which never was opened yet, and went on in black darkness, at the bottom of the sea, for seven days and seven nights. And yet he was not a bit frightened. Why should he be? He was a brave English lad, whose business is to go out and see all the world.

And at last he saw the light, and clear, clear water overhead ; and up he came a thousand fathoms, among clouds of sea-moths, which fluttered round his head. There were moths with pink heads and wings and opal bodies, that flapped about slowly ; moths with brown

wings that flapped about quickly ; yellow shrimps that hopped and skipped most quickly of all ; and jellies of all the colors in the world, that neither hopped nor skipped, but only dawdled and yawned, and would not get out of his way. The dog snapped at them till his jaws were tired ; but Tom hardly minded them at all, he was so eager to get to the top of the water, and see the pool where the good whales go.

And a very large pool it was, miles and miles across, though the air was so clear that the ice cliffs on the opposite side looked as if they were close at hand. All round it the ice cliffs rose, in walls and spires and battlements, and caves and bridges, and stories and galleries, in which the ice-fairies live, and drive away the storms and clouds, that Mother Carey's pool may lie calm from year's end to year's end. And the sun acted policeman, and walked round outside every day, peeping just over the top of the ice wall, to see that all went right ; and now and then he played conjuring tricks, or had an exhibition of fireworks, to amuse the ice-fairies. For he would make himself into four or five suns at once, or paint the sky with rings and crosses and crescents of white fire, and stick himself in the middle of them, and wink at the fairies ; and I dare say they were very much amused, for anything's fun in the country.

And there the good whales lay, the happy sleepy beasts, upon the still oily sea. They were all right whales, you must know, and finners, and razor-backs, and bottle-noses, and spotted sea-unicorns with long ivory horns. But the sperm whales are such raging, ramping, roaring, rumbustious fellows, that, if Mother Carey let them in, there would be no more peace in Peacepool. So she packs them away in a great pond by themselves at the South Pole, two hundred and sixty-three miles south-southeast of Mount Erebus, the great volcano in the

ice ; and there they butt each other with their ugly noses, day and night from year's end to year's end. And if they think that sport—why, so do their American cousins.

But here there were only good quiet beasts, lying about like the black hulls of sloops, and blowing every now and then jets of white steam, or sculling round with their huge mouths open, for the sea-moths to swim down their throats. There were no threshers there to thresh their poor old backs, or sword-fish to stab their stomachs, or saw-fish to rip them up, or ice-sharks to bite lumps out of their sides, or whalers to harpoon and lance them. They were quite safe and happy there ; and all they had to do was to wait quietly in Peacepool, till Mother Carey sent for them to make them out of old beasts into new.

Tom swam up to the nearest whale, and asked the way to Mother Carey.

“ There she sits in the middle,” said the whale.

Tom looked ; but he could see nothing in the middle of the pool, but one peaked iceberg ; and he said so.

“ That's Mother Carey,” said the whale, “ as you will find when you get to her. There she sits making old beasts into new all the year round.”

“ How does she do that ? ”

“ That's her concern, not mine,” said the old whale ; and yawned so wide (for he was very large) that there swam into his mouth 943 sea-moths, 13,846 jelly-fish no bigger than pins' heads, a string of salpæ nine yards long, and forty-three little ice-crabs, who gave each other a parting pinch all round, tucked their legs under their stomachs, and determined to die decently, like Julius Cæsar.

“ I suppose,” said Tom, “ she cuts up a great whale like you into a whole shoal of porpoises ? ”

At which the old whale laughed so violently that he coughed up all the creatures ; who swam away again

very thankful at having escaped out of that terrible whale-bone net of his, from which bourn no traveller returns ; and Tom went on to the iceberg, wondering.

And, when he came near it, it took the form of the grandest old lady he had ever seen—a white marble lady, sitting on a white marble throne. And from the foot of the throne there swam away, out and out into the sea, millions of new-born creatures, of more shapes and colors than man ever dreamed. And they were Mother Carey's children, whom she makes out of the sea-water all day long.

He expected, of course,—like some grown people who ought to know better,—to find her snipping, piecing, fitting, stitching, cobbling, basting, filing, planing, hammering, turning, polishing, moulding measuring, chiselling, clipping, and so forth, as men do when they go to work to make anything.

But, instead of that, she sat quite still with her chin upon her hand, looking down into the sea with two great grand blue eyes, as blue as the sea itself. Her hair was as white as the snow, for she was very, very old,—in fact, as old as anything which you are likely to come across, except the difference between right and wrong.

And, when she saw Tom, she looked at him very kindly.

“What do you want, my little man? It is long since I have seen a water-baby here.”

Tom told her his errand, and asked the way to the Other-end-of-Nowhere.

“You ought to know yourself, for you have been there already.”

“Have I, ma'am? I'm sure I forget all about it,” said Tom.

“Then look at me.”

And, as Tom looked into her great blue eyes, he recollected the way perfectly.

Now, was not that strange?

"Thank you, ma'am," said Tom. "Then I won't trouble your ladyship any more. I hear you are very busy?"

"I am never more busy than I am now," she said, without stirring a finger.

"I heard, ma'am, that you were always making new beasts out of old."

"So people fancy. But I am not going to trouble myself to make things, my little dear. I sit here and make them make themselves."

"You are a clever fairy, indeed," thought Tom. And he was quite right.

That is a grand trick of good old Mother Carey's, and a grand answer, which she has had occasion to make several times to impertinent people.

There was once, for instance, a fairy who was so clever that she found out how to make butterflies. I don't mean sham ones; no: but real live ones, which would fly, and eat, and lay eggs, and do everything that they ought; and she was so proud of her skill that she went flying straight off to the North Pole, to boast to Mother Carey how she could make butterflies.

But Mother Carey laughed.

"Know, silly child," she said, "that any one can make things, if they will take time and trouble enough: but it is not every one who, like me, can make things make themselves."

But people do not yet believe that Mother Carey is as clever as all that comes to; and they will not till they, too, go the journey to the Other-end-of-Nowhere.

"And now, my pretty little man," said Mother Carey,

“you are sure you know the way to the Other-end-of-Nowhere?”

Tom thought; and behold, he had forgotten it utterly.

“That is because you took your eyes off me.”

Tom looked at her again, and recollected; and then looked away, and forgot in an instant.

“But what am I to do, ma’am? For I can’t keep looking at you when I am somewhere else.”

“You must do without me, as most people have to do, for nine hundred and ninety-nine thousandths of their lives; and look at the dog instead; for he knows the way well enough, and will not forget it. Besides, you may meet some very queer-tempered people there, who will not let you pass without this passport of mine, which you must hang round your neck and take care of; and, of course, as the dog will always go behind you, you must go the whole way backward.”

“Backward!” cried Tom. “Then I shall not be able to see my way.”

“On the contrary, if you look forward, you will not see a step before you, and be certain to go wrong; but, if you look behind you, and watch carefully whatever you have passed, and especially keep your eye on the dog, who goes by instinct, and therefore can’t go wrong, then you will know what is coming next as plainly as if you saw it in a looking-glass.”

Tom was very much astonished; but he obeyed her, for he had learnt always to believe what the fairies told him.

“So it is, my dear child,” said Mother Carey; “and I will tell you a story, which will show you that I am perfectly right, as it is my custom to be.”

“Once on a time, there were two brothers. One was called Prometheus, because he always looked before him, and boasted that he was wise before-hand. The other

was called Epimetheus, because he always looked behind him, and did not boast at all ; but said humbly, like the Irishman, that he had sooner prophesy after the event.

“Well, Prometheus was a very clever fellow, of course and invented all sorts of wonderful things. But, unfortunately, when they were set to work, to work was just what they would not do : wherefore very little has come of them, and very little is left of them ; and now nobody knows what they were, save a few archæological old gentlemen who scratch in queer corners, and find little there save *Ptinum Furem*, *Blaptem Mortisagam*, *Acarum Horridum*, and *Tineam Laciniarum*.

“But Epimetheus was a very slow fellow, certainly, and went among men for a clod, and a muff, and a milk-sop, and a slowcoach, and a bloke, and a boodlc, and so forth. And very little he did, for many years ; but what he did, he never had to do over again.

“And what happened at last ? There came to the two brothers the most beautiful creature that ever was seen, Pandora by name ; which means, All the gifts of the gods. But because she had a strange box in her hand, this fanciful, forecasting, suspicious, prudential, theoretical, deductive, prophesying Prometheus, who was always settling what was going to happen, would have nothing to do with pretty Pandora and her box.

“But Epimetheus took her and it, as he took everything that came ; and married her for better for worse, as every man ought, whenever he has even the chance of a good wife. And they opened the box between them, of course, to see what was inside : for, else, of what possible use could it have been to them ?

“And out flew all the ills which flesh is heir to ; all the children of the four great bogies, Self-will, Ignorance, Fear, and Dirt ;—for instance :

Measles,	Famines,
Monks,	Quacks,
Scarlatina,	Unpaid bills,
Idols,	Tight stays,
Whooping-coughs,	Potatoes,
Popes,	Bad Wine,
Wars,	Despots,
Peacemongers,	Demagogues,

And, worst of all, Naughty Boys and Girls :

But one thing remained at the bottom of the box, and that was Hope.

“So Epimetheus got a deal of trouble, as most men do in this world : but he got the three best things in the world into the bargain—a good wife, and experience, and hope : while Prometheus had just as much trouble, and a great deal more (as you will hear), of his own making ; with nothing beside, save fancies spun out of his own brain, as a spider spins her web out of her stomach.

“And Prometheus kept on looking before him so far ahead, that he was running about with a box of lucifers (which were the only useful things he ever invented, and do as much harm as good), he trod on his own nose, and tumbled down (as most deductive philosophers do), whereby he set the Thames on fire ; and they have hardly put it out again yet. So he had to be chained to the top of a mountain, with a vulture by him to give him a peck whenever he stirred, lest he should turn the whole world upsidedown with his prophecies and his theories.

“But stupid old Epimetheus went working and grubbing on, with the help of his wife Pandora, always looking behind him to see what had happened, till he really learn. to know now and then what would happen next ; and understood so well which side his bread was buttered, and which way the cat jumped, that he began to make

things which would work, and go on working, too : to till and drain the ground, and to make looms, and ships, and railroads, and steam-ploughs, and electric telegraphs, and all the things which you see in the Great Exhibition ; and to foretell famine, and bad weather, and the price of stocks, and the end of President Lincoln's policy ; till at last he grew as rich as a Jew, and as fat as a farmer ; and people thought twice before they meddled with him, but only once before they asked him to help them ; for, because he earned his money well, he could afford to spend it well likewise.

“And his children are the men of science, who get good lasting work done in the world : but the children of Prometheus are the fanatics, and the theorists, and the bigots, and the bores, and the noisy windy people, who go telling silly folk what will happen, instead of looking to see what has happened already.”

Now, was not Mother Carey's a wonderful story ? And, I am happy to say, Tom believed it every word.

For so it happened to Tom likewise. He was very sorely tried ; for though, by keeping the dog to heels (or rather to toes, for he had to walk backward), he could see pretty well which way the dog was hunting, yet it was much slower work to go backwards than to go forwards. But, what was more trying still, no sooner had he got out of Peacepool, than there came running to him all the conjurers, fortune-tellers, astrologers, prophesiers, projectors, prestigiators, as many as were in those parts (and there are too many of them everywhere), Old Mother Shipton on her broomstick, with Merlin, Thomas the Rhymer, Gerbertus, Rabanus Maurus, Nostradamus, Zadkiel, Raphael Moore, Old Nixon, and a good many in black coats and white ties who might have known better, considering in what century they were born, all bawling and screaming at him, “Look ahead, only look

ahead ; and we will show you what man never saw before, and right away to the end of the world ! ”

But I am proud to say that, though Tom had not been at Cambridge,—for, if he had, he would have certainly been senior wrangler,—he was such a little dogged, hard, gnarly, foursquare brick of an English boy, that he never turned his head round once all the way from Peacepool to the Other-end-of-Nowhere ; but kept his eye on the dog, and let him pick out the scent, hot or cold, straight or crooked, wet or dry, up hill or down dale ; by which means he never made a single mistake, and saw all the wonderful and hitherto by-no-mortal-man-imagined things, which it is my duty to relate to you in the next chapter.

CHAPTER VIII. AND LAST.

"COME to me, O ye children !
 For I hear you at your play ;
 And the questions that perplexed me
 Have vanished quite away.

"Ye open the Eastern windows,
 That look towards the sun,
 Where thoughts are singing swallows,
 And the brooks of morning run.

* * * * *

"For what all our contrivings
 And the wisdom of our books,
 When compared with your caresses
 And the gladness of your looks ?

"Ye are better than all the ballads
 That ever were sung or said ;
 For ye are living poems,
 And all the rest are dead."—LONGFELLOW.

HERE begins the never-to-be-too-much-studied account of the nine-hundred-and-ninety-ninth part of the wonderful things which Tom saw, on his journey to the Other-end-of-Nowhere : which all good little children are requested to read ; that, if ever they get to the Other-end-of-Nowhere, as they may very probably do, they may not burst out laughing, or try to run away, or do any other silly vulgar thing which may offend Mrs. Bedonebyasyoudid.

Now, as soon as Tom had left Peacepool, he came to the white lap of the great sea-mother, ten thousand fathoms deep ; where she makes world-pap all day long, for

the steam-giants to knead, and the fire-giants to bake, till it has risen and hardened into mountain-loaves and island-cakes.

And there Tom was very near being kneaded up in the world-pap, and turned into a fossil water-baby ; which would have astonished the Geological Society of New Zealand some hundreds of thousands of years hence.

For, as he walked along in the silence of the sea-twilight, on the soft white ocean-floor, he was aware of a hissing, and a roaring, and a thumping, and a pumping, as of all the steam-engines in the world at once. And, when he came near, the water grew boiling hot ; not that that hurt him in the least : but it also grew as foul as gruel ; and every moment he stumbled over dead shells, and fish, and sharks, and seals, and whales, which had been killed by the hot water.

And at last he came to the great sea-serpent himself, lying dead at the bottom ; and, as he was too thick to scramble over, Tom had to walk round him three quarters of a mile and more, which put him out of his path sadly ; and, when he had got round, he came to the place called Stop. And there he stopped, and just in time.

For he was on the edge of a vast hole in the bottom of the sea, up which was rushing and roaring clear steam enough to work all the engines in the world at once ; so clear, indeed, that it was quite light at moments ; and Tom could see almost up to the top of the water above, and down below into the pit for nobody knows how far.

But, as soon as he bent his head over the edge, he got such a rap on the nose from pebbles, that he jumped back again : for the steam, as it rushed up, rasped away the sides of the hole, and hurled it up into the sea in a shower of mud and gravel and ashes ; and then it spread all around, and sank again, and covered in the dead fish so fast, that before Tom had stood there five minutes he was

buried in silt up to his ankles, and began to be afraid that he should have been buried alive.

And, perhaps he would have been, but that while he was thinking, the whole piece of ground on which he stood was torn off and blown upwards, and away flew Tom a mile up through the sea, wondering what was coming next.

At last he stopped—thump ! and found himself tight in the legs of the most wonderful bogy which he had ever seen.

It had I don't know how many wings, as big as the sails of a windmill, and spread out in a ring like them ; and with them it hovered over the steam which rushed up, as a ball hovers over the top of a fountain. And for every wing above it had a leg below, with a claw like a comb at the tip, and a nostril at the root ; and in the middle it had no stomach and one eye ; and as for its mouth, that was all on one side, as the madreporiform tubercle in a star-fish is. Well, it was a very strange beast ; but no stranger than some dozens which you may see.

“What do you want here,” it cried quite peevishly, “getting in my way ?” and it tried to drop Tom : but he held on tight to its claws, thinking himself safer where he was.

So Tom told him who he was, and what his errand was. And the thing winked its one eye, and sneered,—

“I am too old to be taken in in that way. You are come after gold,—I know you are.”

“Gold ! What is gold ?” And really Tom did not know ; but the suspicious old bogy would not believe him.

But after a while Tom began to understand a little. For, as the vapors came up out of the hole, the bogy smelt them with his nostrils, and combed them and sorted them with his combs ; and then, when they steamed up through them against his wings, they were changed into showers

and streams of metal. From one wing fell gold-dust, and from another silver, and from another copper, and from another tin, and from another lead, and so on, and sank into the soft mud, into veins and cracks, and hardened there. Whereby it comes to pass that the rocks are full of metal.

But, all of a sudden, somebody shut off the steam below, and the hole was left empty in an instant ; and then down rushed the water into the hole, in such a whirlpool that the bogy spun round and round as fast as a tee-totum. But that was all in his day's work, like a fair fall with the hounds ; so all he did was to say to Tom,—

“Now is your time, youngster, to get down, if you are in earnest, which I don't believe.”

“You'll soon see,” said Tom ; and away he went, as bold as Baron Munchausen, and shot down the rushing cataract like a salmon at Ballisodare.

And when he got to the bottom, he swam till he was washed on shore safe upon the Other-end-of-Nowhere ; and he found it, to his surprise, as most other people do, much more like This-End-of-Somewhere than he had been in the habit of expecting.

And first he went through Waste-paper-land, where all the stupid books lie in heaps, up hill and down dale, like leaves in a winter wood ; and there he saw people digging and grubbing among them, to make worse books out of bad ones, and thrashing chaff to save the dust of it ; and a very good trade they drove thereby, especially among children.

Then he went by the sea of slops, to the mountain of messes, and the territory of tuck, where the ground was very sticky, for it was all made of bad toffee (not Everton toffee, of course), and full of deep cracks and holes choked with wind-fallen fruit, and green gooseberries, and sloes, and crabs, and whinberries, and hips, and

haws, and all the nasty things which little children will eat if they can get them. But the fairies hide them out of the way in that country as fast as they can ; and very hard work they have, and of very little use it is. For as fast as they hide away the old trash, foolish and wicked people make fresh trash full of lime and poisonous paints, and actually go and steal receipts out of old Madame Science's big book to invent poisons for little children, and sell them at wakes and fairs and tuckshops. Very well. Let them go on. Dr. Letheby and Dr. Hassall cannot catch them, though they are setting traps for them all day long. But the Fairy with the birch-rod will catch them all in time, and make them begin at one corner of their shops, and eat their way out at the other ; by which time they will have got such stomach-aches as will cure them of poisoning little children.

Next he saw all the little people in the world, writing all the little books in the world, about all the other little people in the world ; probably because they had no great people to write about : and if the names of the books were not Squeeky, nor the Pumplighter, nor the Narrow Narrow World, nor the Hills of the Chattermuch, nor the Children's Twaddeday, why then they were something else. And all the rest of the little people in the world read the books, and thought themselves each as good as the President ; and perhaps they were right, for every one knows his own business best. But Tom thought he would sooner have a jolly good fairy-tale about Jack the Giant-killer, or Beauty and the Beast, which taught him something that he didn't know already.

And next he came to the centre of Creation (the hub, they call it there), which lies in latitude 42.21 south, and longitude 108.56 east.

And there he found all the wise people instructing mankind in the science of spirit-rapping, while their house

was burning over their heads : and when Tom told them of the fire, they held an indignation meeting forthwith, and unanimously determined to hang Tom's dog for coming into their country with gunpowder in his mouth. Tom couldn't help saying that though they did fancy they had carried all the wit away with them out of Lincolnshire two hundred years ago, yet if they had had one such Lincolnshire nobleman among them as good old Lord Yarborough, he would have called for the fire-engines before he hanged other people's dogs. But it was of no use, and the dog was hanged : and Tom couldn't even have his carcase ; for they had abolished the have-his-carcase act in that country, for fear lest when rogues fell out, honest men should come by their own. And so they would have succeeded perfectly, as they always do, only that (as they also always do) they failed in one little particular, viz : that the dog would not die, being a water-dog, but bit their fingers so abominably that they were forced to let him go, and Tom likewise, as British subjects. Whereon they recommenced rapping for the spirits of their fathers ; and very much astonished the poor old spirits were when they came, and saw how, according to the laws of Mrs. Bedonebyasyoudid, their descendants had weakened their constitution by hard living.

Then came Tom to the island of Polupragmosyne, which some call Rogues' Harbor (but they are wrong ; for that is in the middle of Bramshill Bushes, and the county police have cleared it out long ago). There every one knows his neighbor's business better than his own ; and a very noisy place it is, as might be expected, considering that all the inhabitants are ex-officio on the wrong side of the house in the "Parliament of Man, and the Federation of the World" ; and are always making wry mouths, and crying that the fairies' grapes were sour.

There Tom saw ploughs drawing horses, nails driving hammers, birds' nests taking boys, books making authors, bulls keeping china-shops, monkeys shaving cats, dead dogs drilling live lions, blind brigadiers shelved as principals of colleges, play-actors not in the least shelved as popular preachers ; and, in short, every one set to do something which he had not learnt, because in what he had learnt, or pretended to learn, he had failed.

There stands the Pantheon of the Great Unsuccessful, from the builders of the Tower of Babel to those of the Trafalgar Fountains ; in which politicians lecture on the constitutions which ought to have marched, conspirators on the revolutions which ought to have succeeded, economists on the schemes which ought to have made every one's fortune, projectors on the discoveries which ought to have set the Thames on fire ; and (in due time) presidents on the union which ought to have reunited, and secretaries of state on the greenbacks which ought to have done just as well as hard money. There cobblers lecture on orthopedy (whatsoever that may be) because they cannot sell their shoes ; and poets on *Æsthetics* (whatsoever that may be) because they cannot sell their poetry. There philosophers demonstrate that England would be the freest and richest country in the world if she would only turn Papist again ; penny-a-liners abuse the Times, because they have not wit enough to get on its staff ; and young ladies walk about with lockets of Charles the First's hair (or of somebody else's, when the Jew's' genuine stock is used up), inscribed with the neat and appropriate legend—which indeed is popular through all that land, and which, I hope, you will learn to translate in due time and to perpend likewise,—

“Victrix causa diis placuit, sed victa puellis.”

When he got into the middle of the town, they all set

on him at once, to show him his way ; or rather to show him that he did not know his way ; for as for asking him what way he wanted to go, no one ever thought of that.

But one pulled him hither, and another poked him thither, and a third cried—

“ You mustn’t go west, I tell you ; it is destruction to go west.”

“ But I am not going west, as you may see, ” said Tom.

And another, “ The east lies here, my dear ; I assure you this is the east.”

“ But I don’t want to go east,” said Tom.

“ Well, then, at all events, whichever way you are going, you are going wrong,” cried they all with one voice,—which was the only thing which they ever agreed about ; and all pointed at once to all the thirty-and-two points of the compass, till Tom thought all the sign-posts in England had got together, and fallen fighting.

And whether he would have ever escaped out of the town, it is hard to say, if the dog had not taken it into his head that they were going to pull his master in pieces, and tackled them so sharply about the gastrocnemius muscle, that he gave them some business of their own to think of at last ; and while they were rubbing their bitten calves, Tom and the dog got safe away.

On the borders of that island he found Gotham where the wise men live ; the same who dragged the pond because the moon had fallen into it, and planted a hedge round the cuckoo, to keep spring all the year. And he found them bricking up the town-gate, because it was so wide that little folks could not get through. And, when he asked why, they told him they were expanding their *iturgy*. So he went on ; for it was no business of his : only he could not help saying that in his country, if the kitten could not get in at the same hole as the cat she might stay outside and mew,

But he saw the end of such fellows, when he came to the island of the Golden Asses, where nothing but thistles grow. For there they were all turned into mokes with ears a yard long, for meddling with matters which they don't understand, as Lucius did in the story. And like him, mokes they must remain, till, by the laws of development, the thistles develop into roses. Till then, they must comfort themselves with the thought, that the longer their ears are, the thicker their hides; and so a good beating don't hurt them.

Then came Tom to the great land of Hearsay, in which are no less than thirty and odd kings, beside half a dozen republics, and perhaps more by next mail.

And there he fell in with a deep, dark, deadly, and destructive war, waged by the princes and potentates of those parts, both spiritual and temporal, against what do you think? One thing I am sure of: that unless I told you, you would never know; nor how they waged that war either; for all their strategy and art military consisted in the safe and easy process of stopping their ears and screaming, "Oh, don't tell us!" and then running away.

So when Tom came into that land, he found them all, high and low, man, woman, and child, running for their lives day and night continually, and entreating not to be told they didn't know what: only the land being an island, and they, having a dislike to the water (being a musty lot for the most part), ran round and round the shore forever, which (as the island was exactly the same circumference as the planet on which we have the honor of living) was hard work, especially to those who had business to look after. But before them, as bandmaster and flugelman, ran a gentleman shearing a pig; the melodious strains of which animal led them forever, if not to conquest, still to flight; and kept up their spirits

mightily with the thought that they would at least have the pig's wool for their pains.

And running after them, day and night, came such a poor, lean, seedy, hard-worked old giant, as ought to have been cockered up, and had a good dinner given him, and a good wife found him, and been set to play with little children; and then he would have been a very presentable old fellow after all; for he had a heart, though it was considerably overgrown with brains.

He was made up principally of fish-bones and parchment, put together with wire and Canada balsam; and smelt strongly of spirits, though he never drank anything but water: but spirits he used somehow, there was no denying. He had a great pair of spectacles on his nose, and a butterfly-net in one hand, and a geological hammer in the other; and was hung all over with pockets, full of collecting boxes, bottles, microscopes, telescopes, barometers, ordnance maps, scalpels, forceps, photographic apparatus, and all other tackle for finding out everything about everything, and a little more too. And, most strange of all, he was running not forwards but backwards, as fast as he could.

Away all the good folks ran from him, except Tom, who stood his ground and dodged between his legs; and the giant, when he had passed him, looked down, and cried, as if he was quite pleased and comforted,—

“What? who are you? And you actually don't run away, like all the rest?” But he had to take his spectacles off, Tom remarked, in order to see him plainly.

Tom told him who he was; and the giant pulled out a bottle and a cork instantly, to collect him with.

But Tom was too sharp for that, and dodged between his legs and in front of him; and then the giant could not see him at all.

“No, no, no!” said Tom, “I've not been round the

world, and through the world, and up to Mother Carey's haven, beside being caught in a net and called a Holothurian and a Cephalopod, to be bottled up by any old giant like you."

And when the giant understood what a great traveller Tom had been, he made a truce with him at once, and would have kept him there to this day to pick his brains, so delighted was he at finding any one to tell him what he did not know before.

"Ah, you lucky little dog!" said he at last, quite simply,—for he was the simplest, pleasantest, honestest, kindest old Dominie Sampson of a giant that ever turned the world upsidedown without intending it,—“Ah, you lucky little dog! If I had only been where you have been, to see what you have seen!”

"Well," said Tom, "if you want to do that, you had best put your head under water for a few hours, as I did, and turn into a water-baby, or some other baby, and then you might have a chance."

"Turn into a baby, eh? If I could do that, and know what was happening to me for but one hour, I should know everything then, and be at rest. But I can't; I can't be a little child again; and I suppose if I could, it would be no use, because then I should know nothing about what was happening to me. Ah, you lucky little dog!" said the poor old giant.

"But why do you run after all these poor people?" said Tom, who liked the giant very much.

"My dear, it's they that have been running after me, father and son, for hundreds and hundreds of years, throwing stones at me till they have knocked off my spectacles fifty times, and calling me a malignant and a turbaned Turk, who beat a Venetian and traduced the state,—goodness only knows what they mean, for I never read poetry,—and hunting me round and round—though

catch me they can't, for every time I go over the same ground, I go the faster, and grow the bigger. While all I want is to be friends with them, and to tell them something to their advantage, like Mr. Joseph Ady : only somehow they are so strangely afraid of hearing it. But, I suppose I am not a man of the world, and have no tact."

"But why don't you turn round and tell them so?"

"Because I can't. You see, I am one of the sons of Epimetheus, and must go backwards, if I am to go at all."

"But why don't you stop, and let them come up to you?"

"Why, my dear, only think. If I did, all the butterflies and cockyolybirds would fly past me, and then I could catch no more new species, and should grow rusty and mouldy, and die. And I don't intend to do that, my dear ; for I have a destiny before me, they say : though what it is I don't know, and don't care."

"Don't care?" said Tom.

"No. Do the duty which lies nearest you, and catch the first beetle you come across, is my motto ; and I have thriven by it for some hundred years. Now I must go on. Dear me, while I have been talking to you, at least nine new species have escaped me."

And on went the giant, behind before, like a bull in a china shop, till he ran into the steeple of the great idol temple (for they are all idolaters in those parts, of course, else they would never be afraid of giants), and knocked the upper half clean off, hurting himself horribly about the small of the back.

But little he cared ; for as soon as the ruins of the steeple were well between his legs, he poked and peered among the falling stones and shifted his spectacles, and pulled out his pocket-magnifier, and cried,—

"An entirely new *Oniscus*, and three obscure *Podu-*

rellæ! Beside a moth which M. le Roi des Papillons (though he, like all Frenchmen, is given to hasty inductions) says is confined to the limits of the Glacial Drift. This is most important!"

And down he sat on the nave of the temple (not being a man of the world) to examine his Podurellæ. Whereon (as was to be expected) the roof caved in bodily, smashing the idols, and sending the priests flying out of doors and windows, like rabbits out of a burrow when a ferret goes in.

But he never heeded; for out of the dust flew a bat, and the giant had him in a moment.

"Dear me! This is even more important! Here is a cognate species to that which Macgilliwaukie Brown insists is confined to the Buddhist Temples of Little Thibet; and now when I look at it, it may be only a variety produced by difference of climate!"

And having bagged his bat, up he got, and on he went; while all the people ran, being in none the better humor for having their temple smashed for the sake of three obscure species of Podurellæ, and a Buddhist bat.

"Well," thought Tom; "this is a very pretty quarrel, with a good deal to be said on both sides. But it is no business of mine."

And no more it was; because he was a water-baby, and had the original sow by the right ear; which you will never have, unless you be a baby, whether of the water, the land, or the air, matters not, provided you can only keep on continually being a baby.

So the giant ran round after the people, and the people ran round after the giant, and they are running unto this day for aught I know, or do not know; and will run till either he, or they, or both, turn into little children. And then, as Shakspeare says (and therefore it must be true),—

“Jack shall have Gill
 Nought shall go ill
 The man shall have his mare again, and all go well.”

Then Tom came to a very famous island, which was called, in the days of the great traveller Captain Gulliver, the Isle of Laputa. But Mrs. Bedonebyasyoudid has named it over again, the Isle of Tomtoddies, all heads and no bodies.

And when Tom came near it, he heard such a grumbling and grunting and growling and wailing and weeping and whining that he thought people must be ringing little pigs, or cropping puppies' ears, or drowning kittens: but when he came nearer still, he began to hear words among the noise; which was the Tomtoddies' song, which they sing morning and evening, and all night too, to their great idol Examination,—

“I can't learn my lesson: the examiner's coming!”

And that was the only song which they knew.

And when Tom got on shore, the first thing he saw was a great pillar, on one side of which was inscribed, “Play-things not allowed here;” at which he was so shocked that he would not stay to see what was written on the other side. Then he looked round for the people of the island: but instead of men, women, and children, he found nothing but turnips and radishes, beet and mangel-wurzel, without a single green leaf among them, and half of them burst and decayed, with toadstools growing out of them. Those which were left began crying to Tom, in half a dozen different languages at once, and all of them badly spoken, “I can't learn my lesson; do come and help me!” And one cried, “Can you show me how to extract this square-root?”

And another, “Can you tell me the distance between α Lyræ and β Camelopardalis?”

And another, "What is the latitude and longitude of Snooksville, in Noman's County, Oregon, U. S.?"

And another, "What was the name of Mutius Scævola's thirteenth cousin's grandmother's maid's cat?"

And another, "How long would it take a school-inspector of average activity to tumble head over heels from London to York?"

And another, "Can you tell me the name of a place that nobody ever heard of, where nothing ever happened, in a country which has not been discovered yet?"

And another, "Can you show me how to correct this hopelessly corrupt passage of Graidicolosyrthus Tabenniticus, or the cause why crocodiles have no tongues?"

And so on, and so on, and so on, till one would have thought they were all trying for tide-waiters' places, or cornetcies in the heavy-dragoons.

"And what good on earth will it do you if I did tell you?" quoth Tom.

Well, they didn't know that: all they knew was, the examiner was coming.

Then Tom stumbled on the hugest and softest nimble-comequick turnip you ever saw filling a hole in a crop of swedes, and it cried to him, "Can you tell me anything at all about anything you like?"

"About what?" says Tom.

"About anything you like; for as fast as I learn things I forget them again. So my mamma says that my intellect is not adapted for methodic science, and says that I must go in for general information."

Tom told him that he did not know general information, nor any officers in the army; only he had a friend once that went for a drummer: but he could tell him a great many strange things which he had seen in his travels.

So he told him prettily enough, while the poor turnip listened very carefully ; and the more he listened, the more he forgot, and the more water ran out of him.

Tom thought he was crying ; but it was only his poor brains running away, from being worked so hard ; and as Tom talked, the unhappy turnip streamed down all over with juice, and split and shrank till nothing was left of him but rind and water ; whereat Tom ran away in a fright, for he thought he might be taken up for killing the turnip.

But, on the contrary, the turnip's parents were highly delighted, and considered him a saint and a martyr, and put up a long inscription over his tomb about his wonderful talents, early development, and unparalleled precocity. Were they not a foolish couple ? But there was a still more foolish couple next to them, who were beating a wretched little radish, no bigger than my thumb, for sullenness and obstinacy and wilful stupidity, and never knew that the reason why it couldn't learn or hardly even speak was, that there was a great worm inside it eating out all its brains. But even they are no foolisher than some hundred score of papas and mammas, who fetch the rod when they ought to fetch a new toy, and send to the dark cupboard instead of to the doctor.

Tom was so puzzled and frightened with all he saw that he was longing to ask the meaning of it ; and at last he stumbled over a respectable old stick lying half covered with earth. But a very stout and worthy stick it was, for it belonged to good Roger Ascham in old time, and had carved on its head King Edward the Sixth, with the Bible in his hand.

"You see," said the stick, "they were as pretty little children once as you could wish to see, and might have been so still if they had been only left to grow up like human beings, and then handed over to me ; but their

foolish fathers and mothers, instead of letting them pick flowers, and make dirt-pies, and get birds-nests, and dance round the gooseberry bush, as little children should, kept them always at lessons, working, working, working, learning weekday lessons all weekdays, and Sunday lessons all Sunday, and weekly examinations every Saturday, and monthly examinations every month, and yearly examinations every year everything seven times over, as if once was not enough and enough as good as a feast—till their brains grew big, and their bodies grew small, and they were all changed into turnips, with little but water inside; and still their foolish parents actually pick the leaves off them as fast as they grow, lest they should have any thing green about them.”

“Ah!” said Tom, “if dear Mrs. Doasyouwould-bedoneby knew of it she would send them a lot of tops, and balls, and marbles, and ninepins, and make them all as jolly as sand-boys.”

“It would be no use,” said the stick. “They can’t play now, if they tried. Don’t you see how their legs have turned to roots and grown into the ground, by never taking any exercise, but sapping and moping always in the same place? But here comes the Examiner-of-all-Examiners. So you had better get away, I warn you, or he will examine you and your dog into the bargain, and set him to examine all the other dogs, and you to examine all the other water-babies. There is no escaping out of his hands, for his nose is nine thousand miles long, and can go down chimneys and through keyholes, upstairs, downstairs, and in my lady’s chamber, examining all little boys, and the little boys’ tutors likewise. But when he is thrashed,—so Mrs. Bedonebyasyoudid has promised me,—I shall have the thrashing of him; and if I don’t lay it on with a will, it’s a pity.”

Tom went off: but rather slowly and surlily; for he

dear—eh? I'll do that for you. I'll make an impression on you! Yah! Boo! Whirroo! Hullabaloo!"

And he rattled, thumped, brandished his thunderbox, yelled, shouted, raved, roared, stamped, and danced corrobory like any black fellow; and then he touched a spring in the thunderbox, and out popped turnip-ghosts and magic lanterns and paste-board bogies and spring-heeled Jacks and sallabalas, with such a horrid din, clatter, clank, roll, rattle, and roar, that the little boy turned up the whites of his eyes, and fainted right away.

And at that his poor heathen papa and mamma were as much delighted as if they had found a gold mine; and fell down upon their knees before the Pow-wow man, and gave him a palanquin with a pole of solid silver and curtains of cloth of gold; and carried him about in it on their own backs; but as soon as they had taken him up, the pole stuck to their shoulders, and they could not set him down any more, but carried him on willy-nilly, as Sinbad carried the old man of the sea: which was a pitiable sight to see; for the father was a very brave officer, and wore two swords and a blue button; and the mother was as pretty a lady as ever had pinched feet like a Chinese. But you see, they had chosen to do a foolish thing just once too often; so by the laws of Mrs. Be-doneyasyoudid, they had to go on doing it whether they chose or not, till the coming of the Cocqigrues.

Ah! don't you wish that some one would go and convert those poor heathens, and teach them not to frighten their little children into fits?

"Now, then," said the Pow-wow man to Tom, "wouldn't you like to be frightened, my little dear? For I can see plainly that you are a very wicked, naughty, graceless, reprobate boy."

"You're another," quoth Tom, very sturdily. And

when the man ran at him, and cried "Boo!" Tom ran at him in return, and cried "Boo!" likewise, right in his face, and set the little dog upon him; and at his legs the dog went.

At which, if you will believe it, the fellow turned tail, thunderbox and all, with a "Woof!" like an old sow on the common; and ran for his life, screaming, "Help! thieves! murder! fire! He is going to kill me! I am a ruined man! He will murder me; and break, burn, and destroy my precious and invaluable thunderbox; and then you will have no more thunder-showers in the land. Help! help! help!"

At which the papa and mamma, and all the people of Oldwivesfabledom, flew at Tom, shouting, "Oh, the wicked, impudent, hard-hearted, graceless boy! Beat him, kick him, shoot him, drown him, hang him, burn him!" and so forth: but luckily they had nothing to shoot, hang, or burn him with, for the fairies had hid all the killing-tackle out of the way a little while before; so they could only pelt him with stones; and some of the stones went clean through him, and came out the other side. But he did not mind that a bit; for the holes closed up again as fast as they were made, because he was a water-baby. However, he was very glad when he was safe out of the country, for the noise there made him all but deaf.

Then he came to a very quiet place, called Leave-heavenalone. And there the sun was drawing water out of the sea to make steam-threads, and the wind was twisting them up to make cloud-patterns, till they had worked between them the loveliest wedding veil of Chantilly lace, and hung it up in their own Crystal Palace for any one to buy who could afford it; while the good old sea never grudged, for she knew they would pay her back honestly. So the sun span, and the wind wove, and all went well with

the great steam loom ; as is likely, considering—and considering—and considering—

And at last, after innumerable adventures, each more wonderful than the last, he saw before him a huge building, much bigger, and—what is most surprising—a little uglier than a certain new lunatic asylum, but not built quite of the same materials. None of it, at least,—or, indeed, for aught that I ever saw, any part of any other building whatsoever,—is cased with nine-inch brick inside and out, and filled up with rubble between the walls, in order that any gentleman who has been confined during her Majesty's pleasure may be unconfined during his own pleasure, and take a walk in the neighboring park to improve his spirits, after an hour's light and wholesome labor with his dinner-fork or one of the legs of his iron bedstead. No. The walls of this building were built on an entirely different principle, which need not be described, as it has not yet been discovered.

Tom walked toward this great building, wondering what it was, and having a strange fancy that he might find Mr. Grimes inside it, till he saw running toward him, and shouting "Stop !" three or four people, who, when they came nearer, were nothing else than policemen's truncheons, running along without legs or arms.

Tom was not astonished. He was long past that. Besides, he had seen the naviculæ in the water move nobody knows how, a hundred times, without arms, or legs, or anything to stand in their stead. Neither was he frightened ; for he had been doing no harm.

So he stopped ; and, when the foremost truncheon came up and asked his business, he showed Mother Carey's pass ; and the truncheon looked at it in the oddest fashion ; for he had one eye in the middle of his upper end, so that when he looked at anything, being quite stiff, he had to slope himself, and poke himself, till it was a

wonder why he did not tumble over ; but, being quite full of the spirit of justice (as all policemen, and their truncheons, ought to be), he was always in a position of stable equilibrium, whichever way he put himself.

"All right—pass on," said he at last. And then he added, "I had better go with you, young man." And Tom had no objection, for such company was both respectable and safe ; so the truncheon coiled its thong neatly round its handle, to prevent tripping itself up—for the thong had got loose in running—and marched on by Tom's side.

"Why have you no policeman to carry you?" asked Tom, after a while.

"Because we are not like those clumsy-made truncheons in the land-world, which cannot go without having a whole man to carry them about. We do our own work for ourselves ; and do it very well, though I say it who should not."

"Then why have you a thong to your handle?" asked Tom.

"To hang ourselves up by, of course, when we are off duty."

Tom had got his answer, and had no more to say, till they came up to the great iron door of the prison. And there the truncheon knocked twice, with its own head.

A wicket in the door opened, and out looked a tremendous old brass blunderbuss charged up to the muzzle with slugs, who was the porter ; and Tom started back a little at the sight of him.

"What case is this?" he asked in a deep voice, out of his broad bell-mouth.

"If you please, sir, it is no case ; only a young gentleman from her ladyship, who wants to see Grimes the master-sweep."

"Grimes?" said the blunderbuss. And he pulled in his muzzle, perhaps to look over his prison-lists.

"Grimes is up chimney No. 345," he said from the inside. "So the young gentleman had better go on to the roof."

Tom looked up at the enormous wall, which seemed at least ninety miles high, and wondered how he should ever get up; but, when he hinted that to the truncheon, it settled the matter in a moment. For it whisked round, and gave him such a shove behind as sent him up to the roof in no time, with his little dog under his arm.

And there he walked along the leads, till he met another truncheon, and told him his errand.

"Very good," it said. "Come along: but it will be of no use. He is the most unremorseful, hard-hearted, foul-mouthed fellow I have in charge; and thinks about nothing but beer and pipes, which are not allowed here, of course."

So they walked along over the leads, and very sooty they were, and Tom thought the chimneys must want sweeping very much. But he was surprised to see that the soot did not stick to his feet, or dirty them in the least.

Neither did the live coals, which were lying about in plenty, burn him; for, being a water-baby, his radical humors were of a moist and cold nature, as you may read at large in Lemnius, Cardan, Van Helmont, and other gentlemen, who knew as much as they could, and no man can know more.

And at last they came to chimney No. 345. Out of the top of it, his head and shoulders just showing, stuck poor Mr. Grimes; so sooty, and bleared, and ugly, that Tom could hardly bear to look at him. And in his mouth was a pipe; but it was not a-light, though he was pulling at it with all his might.

"Attention, Mr. Grimes," said the truncheon; "here is a gentleman come to see you."

But Mr. Grimes only said bad words; and kept grumbling, "My pipe won't draw. My pipe won't draw."

"Keep a civil tongue, and attend!" said the truncheon; and popped up just like Punch, hitting Grimes such a crack over the head with itself, that his brains rattled inside like a dried walnut in its shell. He tried to get his hands out, and rub the place; but he could not, for they were stuck fast in the chimney.

Now he was forced to attend.

"Hey!" he said, "why, it's Tom! I suppose you have come here to laugh at me, you spiteful little atomy?"

Tom assured him he had not, but only wanted to help him.

"I don't want anything except beer, and that I can't get; and a light to this bothering pipe, and that I can't get either."

"I'll get you one," said Tom; and he took up a live coal (there were plenty lying about) and put it to Grimes's pipe; but it went out instantly.

"It's no use," said the truncheon, leaning itself up against the chimney, and looking on. "I tell you, it is no use. His heart is so cold that it freezes everything that comes near him. You will see that presently, plain enough."

"Oh, of course, it's my fault. Everything's always my fault," said Grimes. "Now don't go to hit me again (for the truncheon started upright, and looked very wicked); you know, if my arms were only free, you daren't hit me then."

The truncheon leant back against the chimney, and took no notice of the personal insult, like a well-trained policeman as it was, though he was ready enough to avenge any transgression against morality or order.

"But can't I help you in any other way? Can't I help you to get out of this chimney?" said Tom.

"No," interposed the truncheon; "he has come to the place where everybody must help themselves; and he will find it out, I hope, before he is done with me."

"Oh, yes," said Grimes, "of course it's me. Did I ask to be brought here into the prison? Did I ask to be set to sweep your foul chimneys? Did I ask to have lighted straw put under me to make me go up? Did I ask to stick fast in the very first chimney of all, because it was so shamefully clogged up with soot? Did I ask to stay here—I don't know how long—a hundred years, I do believe, and never get my pipe, nor my beer, nor nothing fit for a beast, let alone a man."

"No," answered a solemn voice behind. "No more did Tom, when you behaved to him in the very same way."

It was Mrs. Bedonebyasyoudid. And, when the truncheon saw her, it started bolt upright—Attention!—and made such a low bow, that if it had not been full of the spirit of justice, it must have tumbled on its end, and probably hurt its one eye. And Tom made his bow too.

"Oh, ma'am," he said, "don't think about me; that's all past and gone, and good times and bad times and all times pass over. But may not I help poor Mr. Grimes? Mayn't I try and get some of these bricks away, that he may move his arms?"

"You may try, of course," she said.

So Tom pulled and tugged at the bricks; but he could not move one. And then he tried to wipe Mr. Grimes's face; but the soot would not come off.

"Oh, dear!" he said, "I have come all this way, through all these terrible places, to help you, and now I am of no use after all."

"You had best leave me alone," said Grimes; "you

are a good-natured, forgiving little chap, and that's truth ; but you'd best be off. The hail's coming on soon, and it will beat the eyes out of your little head."

"What hail?"

"Why hail that falls every evening here ; and, till it comes close to me, it's like so much warm rain ; but then it turns to hail over my head, and knocks me about like small shot."

"That hail will never come any more," said the strange lady. "I have told you before what it was. It was your mother's tears, those which she shed when she prayed for you by her bedside ; but your cold heart froze it into hail. But she has gone to heaven now, and will weep no more for her graceless son."

Then Grimes was silent a while ; and then he looked very sad.

"So my old mother's gone, and I never there to speak to her ! Ah ! a good woman she was, and might have been a happy one, in her little school there in Vendale, if it hadn't been for me and my bad ways."

"Did she keep the school in Vendale?" asked Tom. And then he told Grimes all the story of his going to her house, and how she could not abide the sight of a chimney-sweep, and then how kind she was and how he turned into a water-baby.

"Ah !" said Grimes, "good reason she had to hate the sight of a chimney-sweep. I ran away from her and took up with the sweeps, and never let her know where I was, nor sent her a penny to help her, and now it's too late—too late !" said Mr. Grimes.

And he began crying and blubbering like a great baby, till his pipe dropped out of his mouth, and broke all to bits.

"Oh dear, if I was but a little chap in Vendale again, to see the clear beck, and the apple-orchard, and the yew-

hedge, how different I would go on ! But it's too late now. So you go along, you kind little chap, and don't stand to look at a man crying, that's old enough to be your father, and never feared the face of man, nor of worse neither. But I'm beat now, and beat I must be. I've made my bed, and I must lie on it. Foul I would be, and foul I am as an Irish woman said to me once ; and little I heeded it. It's all my own fault ; but it's too late." And he cried so bitterly that Tom began crying too.

"Never too late," said the fairy, in such a strange soft, new voice that Tom looked up at her ; and she was so beautiful for the moment, that Tom half fancied she was her sister.

No more was it too late. For, as poor Grimes cried and blubbered on, his own tears did what his mother's could not do, and Tom's could not do, and nobody's on earth could do for him ; for they washed the soot off his face and off his clothes ; and then they washed the mortar away from between the bricks ; and the chimney crumbled down ; and Grimes began to get out of it.

Up jumped the truncheon, and was going to hit him on the crown a tremendous thump, and drive him down again like a cork into a bottle. But the strange lady put it aside.

"Will you obey me if I give you a chance?"

"As you please, ma'am. You're stronger than me, that I know too well, and wiser than me, I know too well also. And, as for being my own master, I've fared ill enough with that as yet. So whatever your ladyship pleases to order me ; for I'm beat, and that's the truth."

"Be it so then—you may come out. But remember, disobey me again, and into a worse place still you go."

"I beg pardon, ma'am, but I never disobeyed you that I know of. I never had the honor of setting eyes upon you till I came to these ugly quarters."

“Never saw me? Who said to you, Those that will be foul, foul they will be?”

Grimes looked up; and Tom looked up too; for the voice was that of the Irishwoman who met them the day that they went out together to Harthover. “I gave you your warning then: but you gave it yourself a thousand times before and since. Every bad word that you said, —every cruel and mean thing that you did, —every time that you got tipsy, —every day that you went dirty, —you were disobeying me, whether you knew it or not.”

“If I’d only known, ma’am—”

“You knew well enough that you were disobeying something, though you did not know it was me. But come out and take your chance. Perhaps it may be your last.”

So Grimes stepped out of the chimney, and, really, if it had not been for the scars on his face, he looked as clean and respectable as a master-sweep need look.

“Take him away,” said she to the truncheon, “and give him his ticket-of-leave.”

“And what is he to do, ma’am?”

“Get him to sweep out the crater of *Ætna*; he will find some very steady men working out their time there, who will teach him his business; but mind, if that crater gets choked again, and there is an earthquake in consequence, bring them all to me and I shall investigate the case very severely.”

So the truncheon marched off Mr. Grimes, looking as meek as a drowned worm.

And for aught I know, or do not know, he is sweeping the crater of *Ætna* to this very day.

“And now,” said the fairy to Tom, “your work here is done. You may as well go back again.”

“I should be glad enough to go,” said Tom, “but

how am I to get up that great hole again, now the steam has stopped blowing?"

"I will take you up the backstairs; but I must bandage your eyes first; for I never allow anybody to see those backstairs of mine."

"I am sure I shall not tell anybody about them, ma'am, if you bid me not."

"Aha! So you think, my little man. But you would soon forget your promise if you got back into the land-world. For, if people only once found out that you had been up my backstairs, you would have all the fine ladies kneeling to you, and the rich men emptying their purses before you, and statesmen offering you place and power; and young and old, rich and poor, crying to you, 'Only tell us the great backstairs secret, and we will be your slaves; we will make you lord, king, emperor, bishop, archbishop, pope, if you like—only tell us the secret of the backstairs. For thousands of years we have been paying, and petting, and obeying, and worshipping quacks who told us they had the key of the backstairs, and could smuggle us up them; and in spite of all our disappointments, we will honor, and glorify, and adore, and beautify, and translate, and apotheotize you likewise, on the chance of your knowing something about the backstairs, that we may all go on a pilgrimage to it; and even if we cannot get up it, lie at the foot of it and cry:—

'Oh backstairs,	
precious backstairs,	accommodating backstairs,
invaluable backstairs,	well-bred backstairs,
requisite backstairs,	comfortable backstairs,
necessary backstairs,	humane backstairs,
good-natured backstairs,	reasonable backstairs,
cosmopolitan backstairs,	long-sought backstairs,
comprehensive backstairs,	coveted backstairs,

aristocratic backstairs,	logical backstairs,
respectable backstairs,	deductive backstairs,
gentlemanlike backstairs,	orthodox backstairs,
ladylike backstairs,	probable backstairs,
commercial backstairs,	credible backstairs,
economical backstairs,	demonstrable backstairs,
practical backstairs,	irrefragable backstairs,
potent backstairs,	
all-but-omnipotent backstairs,	
etc.	

Save us from the consequences of our own actions, and from the cruel fairy, Mrs. Bedonebyasyoudid! Do not you think that you would be a little tempted then to tell what you know, laddie?"

Tom thought so certainly. "But why do they want so to know about the backstairs?" asked he, being a little frightened at the long words, and not understanding them the least; as, indeed, he was not meant to do, or you either.

"That I shall not tell you. I never put things into little folks' heads which are but too likely to come there of themselves. So come;—now I must bandage your eyes." So she tied the bandage on his eyes with one hand, and with the other she took it off.

"Now," she said, "you are safe up the stairs." Tom opened his eyes very wide, and his mouth too; for he had not, as he thought, moved a single step. But, when he looked round him, there could be no doubt that he was safe up the backstairs, whatsoever they may be, which no man is going to tell you, for the plain reason that no man knows.

The first thing which Tom saw was the black cedars, high and sharp against the rosy dawn; and St. Brandon's Isle reflected double in the still broad silver sea. The wind sang softly in the cedars, and the water sang among

the caves; the sea-birds sang as they streamed out into the ocean, and the landbirds as they built among the boughs; and the air was so full of song that it stirred St. Brandan and his hermits, as they slumbered in the shade; and they moved their good old lips, and sang their morning hymn amid their dreams. But among all the songs one came across the water more sweet and clear than all; for it was the song of a young girl's voice.

And what was the song which she sang? Ah, my little man, I am too old to sing that song, and you too young to understand it. But have patience, and keep your eye single, and your hands clean, and you will learn some day to sing it yourself, without needing any man to teach you.

And as Tom neared the island, there sat upon a rock the most graceful creature that ever was seen, looking down, with her chin upon her hand, and paddling with her feet in the water. And when they came to her she looked up, and behold it was Ellie.

"Oh, Miss Ellie," said he, "how you are grown!"

"Oh, Tom," said she, "how you are grown, too!"

And no wonder; they were both quite grown up: he into a tall man, and she into a beautiful woman.

"Perhaps I may be grown," she said. "I have had time enough; for I have been sitting here waiting for you many a hundred years, till I thought you were never coming."

"Many a hundred years?" thought Tom; but he had seen so much in his travels that he had quite given up being astonished; and, indeed, he could think of nothing but Ellie. So he stood and looked at Ellie, and Ellie looked at him; and they liked the employment so much that they stood and looked for seven years more, and neither spoke nor stirred.

At last they heard the fairy say: "Attention, children! Are you never going to look at me again?"

"We have been looking at you all this while," they said. And so they thought they had been.

"Then look at me once more," said she.

They looked—and both of them cried out at once, "Oh who are you, after all?"

"You are our dear Mrs. Doasyouwouldbedoneby."

"No, you are good Mrs. Bedonebyasyoudid; but you are grown quite beautiful now!"

"To you," said the fairy. "But look again."

"You are Mother Carey," said Tom, in a very low, solemn voice; for he had found out something which made him very happy, and yet frightened him more than all that he had ever seen.

"But you are grown quite young again."

"To you," said the fairy. "Look again."

"You are the Irishwoman who met me the day I went to Harthover!"

And when they looked, she was neither of them, and yet all of them at once.

"My name is written in my eyes, if you have eyes to see it there."

And they looked into her great, deep, soft eyes, and they changed again and again into every hue, as the light changes in a diamond.

"Now read my name," said she, at last.

And her eyes flashed, for one moment, clear, white, blazing light; but the children could not read her name; for they were dazzled, and hid their faces in their hands.

"Not yet, young things, not yet," said she, smiling; and then she turned to Ellie.

"You may take him home with you now on Sundays, Ellie. He has won his spurs in the great battle, and become fit to go with you, and be a man; because he has done the thing he did not like."

So Tom went home with Ellie on Sundays, and some-

times on week-days, too ; and he is now a great man of science, and can plan railroads, and steam-engines, and electric telegraphs, and rifled guns, and so forth ; and knows everything about everything, except why a hen's egg don't turn into a crocodile, and two or three other little things which no one will know till the coming of the Cocqigrues. And all this from what he learnt when he was a water-baby, underneath the sea.

“And of course Tom married Ellie?”

My dear child, what a silly notion ! Don't you know that no one ever marries in a fairy-tale, under the rank of a prince or a princess ?

“And Tom's dog ? ”

Oh, you may see him any clear night in July ; for the old dog-star was so worn out by the last three hot summers, that there have been no dog-days since ; so that they had to take him down and put Tom's dog up in his place. Therefore, as new brooms sweep clean, we may hope for some warm weather this year. And that is the end of my story.

MORAL.

And now, my dear little man, what should we learn from this parable ?

We should learn thirty-seven or thirty-nine things, I am not exactly sure which. But one thing, at least, we may learn, and that is this :—when we see efts in the ponds, never to throw stones at them, or catch them with crooked pins, or put them into vivariums with sticklebacks, that the sticklebacks may prick them in their poor little stomachs, and make them jump out of the glass into somebody's workbox, and so come to a bad end. For these efts are nothing else but the water-babies who are stupid and dirty, and will not learn their lessons and keep themselves clean ; and, therefore (as compara-

tive anatomists will tell you fifty years hence, though they are not learned enough to tell you now), their skulls grow flat, their jaws grow out, and their brains grow small, and their tails grow long, and they lose all their ribs (which I am sure you would not like to do,) and their skins grow dirty and spotted, and they never get into the clear rivers, much less into the great wide sea, but hang about in dirty ponds, and live in the mud, and eat worms, as they deserve to do.

But that is no reason why you should ill-use them: but only why you should pity them, and be kind to them, and hope that some day they will wake up, and be ashamed of their nasty, dirty, lazy, stupid life, and try to amend, and become something better once more. For, perhaps, if they do so, then after 379,423 years, nine months, thirteen days two hours, and twenty-one minutes (for aught that appears to the contrary), if they work very hard and wash very hard all that time, their brains may grow bigger, and their jaws grow smaller, and their ribs come back, and their tails wither off, and they will turn into water babies again, and, perhaps, after that into land-babies; and after that, perhaps, into grown men.

You know they won't? Very well, I dare say you know best. But, you see, some folks have a great liking for those poor little efts. They never did anybody any harm, or could if they tried; and their only fault is, that they do no good—any more than some thousands of their betters. But what with ducks, and what with pike, and what with stickle-backs, and what with water-beetles, and what with naughty boys, they are “sae sair haddened down,” as the Scotsmen say, that it is a wonder how they live; and some folks can't help hoping, with good Bishop Butler, that they may have another chance, to make things fair and even, somewhere, somewhen, somehow.

Meanwhile, do you learn your lessons, and thank God that you have plenty of cold water to wash in ; and wash in it too, like a true English man. And then, if my story is not true, something better is ; and if I am not quite right, still you will be, as long as you stick to hard work and cold water.

But remember always, as I told you at first, that this is all a fairy-tale, and only fun and pretence ; and, therefore, you are not to believe a word of it even if it is true.

MADAM HOW AND LADY WHY

OR

FIRST LESSONS IN EARTH LORE FOR
CHILDREN.

BY

CHARLES KINGSLEY.



MY SON GRENVILLE ARTHUR,

AND TO

HIS SCHOOLFELLOWS AT WINTON HOUSE,

THIS LITTLE BOOK

IS DEDICATED.

PREFACE.

MY DEAR BOYS,—When I was your age, there were no such children's books as there are now. Those which we had were few and dull, and the pictures in them ugly and mean : while you have your choice of books without number, clear, amusing, and pretty, as well as really instructive, on subjects which were only talked of fifty years ago by a few learned men, and very little understood even by them. So if mere reading of books would make wise men, you ought to grow up much wiser than us old fellows. But mere reading of wise books will not make you wise men : you must use for yourselves—the tools with which books are made wise ; and that is—your eyes, and ears, and common sense.

Now, among those very stupid old-fashioned boys' books was one which taught me that ; and therefore I am more grateful to it than if it had been as full of wonderful pictures as all the natural history books you ever saw. Its name was "Evenings at Home" ; and in it was a story called "Eyes and no Eyes" ; a regular old-fashioned, prim, sententious story ; and it began thus :—

"Well, Robert, where have you been walking this afternoon ?" said Mr. Andrews to one of his pupils at the close of a holiday.

Oh—Robert had been to Broom Heath, and round by Camp Mount, and home through the meadows. But it was very dull. He hardly saw a single person. He had much rather have gone by the turnpike-road.

Presently in comes Master William, the other pupil, dressed, I suppose, as wretched boys used to be dressed forty years ago, in a frill-collar, and skeleton monkey-

jacket, and tight trousers bottomed over it and hardly coming down to the ankles, and low shoes which always came off in sticky ground ; and terribly dirty and wet he is : but he never (he says) had such a pleasant walk in his life ; and he has brought home his handkerchief (for boys had no pockets in those days much bigger than key-holes) full of curiosities.

He has got a piece of mistletoe, wants to know what it is ; and he has seen a woodpecker, and a wheat-ear, and gathered strange flowers on the heath ; and hunted a peewit because he thought its wing was broken, till of course it led him into a bog, and very wet he got. But he did not mind it, because he fell in with an old man cutting turf, who told him all about turf-cutting and gave him a dead adder. And then he went up a hill, and saw a grand prospect ; and wanted to go again, and make out the geography of the country from Cary's old county maps, which were the only maps in those days. And then, because the hill was called Camp Mount, he looked for a Roman camp, and found one ; and then he went down to the river, and twenty things more ; and so on, and so on, till he had brought home curiosities enough, and thoughts enough, to last him a week.

Whereon Mr. Andrews, who seems to have been a very sensible old gentleman, tells him all about his curiosities : and then it comes out—if you will believe it—that Master William has been over the very same ground as Master Robert, who saw nothing at all.

Whereon Mr. Andrews says, wisely enough, in his solemn, old-fashioned way—

“ So it is. One man walks through the world with his eyes open, another with his eyes shut ; and upon this difference depends all the superiority of knowledge which one man acquires over another. I have known sailors who had been in all the quarters of the world, and could tell you nothing but the signs of the tippling-houses, and the price and quality of the liquor. On the other hand, Franklin could not cross the Channel without making observations useful to mankind. While many a vacant, thoughtless youth is whirled through Europe without gaining a single idea worth crossing the street for, the serving eye and inquiring mind find matter of improve-

ment and delight in every ramble. You then, William, continue to use your eyes. And you, Robert, learn that eyes were given to you to use."

So said Mr. Andrews : and so I say, dear boys—and so says he who has the charge of you—to you. Therefore I beg all good boys among you to think over this story, and settle in their own minds whether they will be Eyes or No Eyes ; whether they will, as they grow up, look and see for themselves what happens : or whether they will let other people look for them, or pretend to look, and dupe them, and lead them about—the blind leading the blind, till both fall into the ditch.

I say "good boys" ; not merely clever boys, or prudent boys : because using your eyes, or not using them, is a question of doing Right or doing Wrong. God has given you eyes ; it is your duty to God to use them. If your parents tried to teach you your lessons in the most agreeable way, by beautiful picture-books, would it not be ungracious, ungrateful, and altogether naughty and wrong, to shut your eyes to those pictures, and refuse to learn ? And is it not altogether naughty and wrong to refuse to learn from your Father in Heaven, the Great God who made all things, when He offers to teach you all day long by the most beautiful and most wonderful of all picture-books, which is simply all things which you can see, hear, and touch, from the sun and stars above your head to the mosses and insects at your feet ? It is your duty to learn His lessons : and it is your interest. God's Book, which is the Universe, and the reading of God's Book, which is Science, can do you nothing but good, and teach you nothing but truth and wisdom. God did not put this wondrous world about your young souls to tempt or to mislead them. If you ask Him for a fish, He will not give you a serpent. If you ask Him for bread, He will not give you a stone.

So use your eyes and your intellect, your senses and your brains, and learn what God is trying to teach you continually by them. I do not mean that you must stop there, and learn nothing more. Anything but that. There are things which neither your senses nor your brains can tell you ; and they are not only more glorious, but actually more true, and more real, than any things which

you can see or touch. But you must begin at the beginning in order to end at the end, and sow the seed if you wish to gather the fruit. God has ordained that you, and every child which comes into the world, should begin by learning something of the world about him by his senses and his brain ; and the better you learn what they can teach you, the more fit you will be to learn what they cannot teach you. The more you try now to understand *things*, the more you will be able hereafter to understand men, and That which is above men. You began to find out that truly Divine mystery, that you had a mother on earth, simply by lying soft and warm upon her bosom : and so (as Our Lord told the Jews of old) it is by watching the common natural things around you, and considering the lilies of the field, how they grow, that you will begin at least to learn that far Diviner mystery—that you have a Father in Heaven. And so you will be delivered (if you will) out of the tyranny of darkness, and distrust, and fear, into God's free kingdom of light, and faith, and love ; and will be safe from the venom of that tree which is more deadly than the fabled upas of the East. Who planted that tree I know not, it was planted so long ago : but surely it is none of God's planting, neither of the Son of God : yet it grows in all lands and in all climes, and sends its hidden suckers far and wide, even (unless we be watchful) into your hearts and mine. And its name is the Tree of Unreason, whose roots are conceit and ignorance, and its juices folly and death. It drops its venom into the finest brains ; and makes them call sense, nonsense ; and nonsense, sense ; fact, fiction ; and fiction, fact. It drops its venom into the tenderest hearts, alas ! and makes them call wrong, right ; and right, wrong ; love, cruelty ; and cruelty, love. Some say that the axe is laid to the root of it just now, and that it is already tottering to its fall : while others say that it is growing stronger than ever, and ready to spread its upas-shade over the whole earth. For my part, I know not, save that all shall be as God wills. The tree has been cut down already again and again ; and yet has always thrown out fresh shoots and dropped fresh poison from its boughs. But this at least I know : that any little child, who will use the faculties God has given him, may find

an antidote to all its poison in the meanest herb beneath his feet.

There, you do not understand me, my boys ; and the best prayer I can offer for you is, perhaps, that you should never need to understand me : but if that sore need should come, and that poison should begin to spread its mist over your brains and hearts, then you will be proof against it, just in proportion as you have used the eyes and the common sense which God has given you, and have considered the lilies of the field, how they grow.

C. KINGSLEY.

MADAM HOW AND LADY WHY.

CHAPTER I.

THE GLEN.

You find it dull walking up here upon Hartford Bridge Flat, this sad November day? Well, I do not deny that the moor looks somewhat dreary, though dull it need never be. Though the fog is clinging to the fir-trees, and creeping among the heather, till you cannot see as far as Minley Corner, hardly as far as Bramshill woods—and all the Berkshire hills are as invisible as if it was a dark midnight—yet there is plenty to be seen here at our very feet. Though there is nothing left for you to pick, and all the flowers are dead and brown, except here and there a poor, half-withered scrap of bottle-heath, and nothing left for you to catch either, for the butterflies and insects are all dead too, except one poor old Daddy-long-legs, who sits upon that piece of turf, boring a hole with her tail to lay her eggs in, before the frost catches her and ends her like the rest :—though all things, I say, seem dead, yet there is plenty of life around you, at your feet, I may almost say in the very stones on which you tread. And though the place itself be dreary enough, a sheet of flat heather and a little glen in it, with banks of dead fern, and a brown bog between them, and a few fir-trees struggling up—yet, if you only have eyes to see it, that little bit of glen is beautiful and wonderful,—so beautiful, and so wonderful, and so cunningly devised, that it took thousands of years to make it; and it is not, I believe, half finished yet.

How do I know all that? Because a fairy told it me; a fairy who lives up here upon the moor, and indeed in

most places else, if people have but eyes to see her. What is her name? I cannot tell. The best name that I can give her (and I think it must be something like her real name, because she will always answer if you call her by it patiently and reverently) is Madam How. She will come in good time, if she is called, even by a little child. And she will let us see her at her work, and, what is more, teach us to copy her. But there is another fairy here likewise, whom we can hardly hope to see. Very thankful should we be if she lifted even the smallest corner of her veil, and showed us but for a moment if it were but her finger tip—so beautiful is she, and yet so awful too. But that sight, I believe, would not make us proud, as if we had had some great privilege. No, my dear child : it would make us feel smaller, and meaner, and more stupid and more ignorant than we had ever felt in our lives before ; at the same time it would make us wiser than ever we were in our lives before—that one glimpse of the great glory of her whom we call Lady Why.

But I will say more of her presently. We must talk first with Madam How, and perhaps she may help us hereafter to see Lady Why. For she is the servant, and Lady Why is the mistress ; though she has a Master over her again—whose name I leave for you to guess. You have heard it often already, and you will hear it again, for ever and ever.

But of one thing I must warn you, that you must not confound Madame How and Lady Why. Many people do it, and fall into great mistakes thereby,—mistakes that even a little child, if it would think, need not commit. But really great philosophers sometimes make this mistake about Why and How ; and therefore it is no wonder if other people make it too, when they write children's books about the wonders of nature, and call them "Why and Because," or "The Reason Why." The books are very good books, and you should read and study them : but they do not tell you really "Why and Because," but only "How and So." They do not tell you the "Reason Why" things happen, but only "The Way in which they happen." However, I must not blame these good folks : for I have made the same mistake myself often, and may do it again : but all the more shame to me. For see—

you know perfectly the difference between How and Why, when you are talking about yourself. If I ask you, "Why did we go out to-day?" you would not answer, "Because we opened the door." That is the answer to "How did we go out?" The answer to Why we did go out is, "Because we chose to take a walk." Now when we talk about other things beside ourselves, we must remember this same difference between How and Why. If I ask you, "Why does fire burn you?" you would answer, I suppose, being a little boy, "Because it is hot;" which is all you know about it. But if you were a great chemist, instead of a little boy, you would be apt to answer me, I am afraid, "Fire burns because the vibratory motion of the molecules of the heated substance communicates itself to the molecules of my skin, and so destroys their tissue;" which is, I dare say, quite true: but it only tells us how fire burns, the way or means by which it burns; it does not tell us the reason why it burns.

But you will ask, "If that is not the reason why fire burns, what is?" My dear child, I do not know. That is Lady Why's business, who is mistress of Mrs. How, and of you and of me; and, as I think, of all things that you ever saw, or can see, or even dream. And what her reason for making fire burn may be I cannot tell. But I believe on excellent grounds that her reason is a very good one. If I dared to guess, I should say that one reason, at least, why fire burns, is that you may take care not to play with it, and so not only scorch your finger, but set your whole body on fire, and perhaps the house into the bargain, as you might be tempted to do if putting your finger in the fire were as pleasant as putting sugar in your mouth.

My dear child, if I could once get clearly into your head this difference between Why and How, so that you should remember them steadily in after life, I should have done you more good than if I had given you a thousand pounds.

But now that we know that How and Why are two very different matters, and must not be confounded with each other, let us look for Madam How, and see her at work making this little glen; for, as I told you, it is not half made yet. One thing we shall see at once, and see

it more and more clearly the older we grow ; I mean her wonderful patience and diligence. Madam How is never idle for an instant. Nothing is too great or too small for her ; and she keeps her work before her eye in the same moment, and makes every separate bit of it help every other bit. She will keep the sun and stars in order, while she looks after poor old Mrs. Daddy-long-legs there and her eggs. She will spend thousands of years in building up a mountain, and thousands of years in grinding it down again ; and then carefully polish every grain of sand which falls from that mountain, and put it in its right place, where it will be wanted thousands of years hence ; and she will take just as much trouble about that one grain of sand as she did about the whole mountain. She will settle the exact place where Mrs. Daddy-long-legs shall lay her eggs, at the very same time that she is settling what shall happen hundreds of years hence in a star millions of miles away. And I really believe that Madam How knows her work so thoroughly, that the grain of sand which sticks now to your shoe, and the weight of Mrs. Daddy-long-legs' eggs at the bottom of her hole, will have an effect upon suns and stars ages after you and I are dead and gone. Most patient indeed is Madam How. She does not mind the least seeing her own work destroyed ; she knows that it must be destroyed. There is a spell upon her, and a fate, that everything she makes she must unmake again ; and yet, good and wise woman as she is, she never frets, nor tires, nor fudges her work, as we say at school. She takes just as much pains to make an acorn as to make a peach. She takes just as much pains about the acorn which the pig eats, as about the acorn which will grow into a tall oak, and help to build a great ship. She took just as much pains, again, about the acorn which you crushed under your foot just now, and which you fancy will never come to anything. Madam How is wiser than that. She knows that it will come to something. She will find some use for it, as she finds a use for everything. That acorn which you crushed will turn into mould ; and that mould will go to feed the roots of some plant, perhaps next year, if it lies where it is ; or perhaps it will be washed into the brook, and then into the river,

and go down to the sea, and will feed the roots of some plant in some new continent ages and ages hence : and so Madam How will have her cwn again. You dropped your stick into the river yesterday, and it floated away. You were sorry because it had cost you a great deal of trouble to cut it, and peel it, and carve a head and your name on it. Madam How was not sorry, though she had taken a great deal more trouble with that stick than ever you had taken. She had been three years making that stick, out of many things, sunbeams among the rest. But, when it fell into the river, Madam How knew that she should not lose her sunbeams nor anything else : the stick would float down the river, and on into the sea ; and there, when it got heavy with the salt water, it would sink, and lodge, and be buried, and perhaps ages hence turn into coal ; and ages after that some one would dig it up and burn it, and then out would come, as bright warm flame, all the sunbeams that were stored away in that stick : and so Madam How would have her own again. And if that should not be the fate of your stick, still something else will happen to it just as useful in the long run ; for Madam How never loses anything, but uses up all her scraps and odds and ends somehow, somewhere, somewhen, as is fit and proper for the House-keeper of the whole Universe. Indeed, Madam How is so patient that some people fancy her stupid, and think that, because she does not fall into a passion every time you steal her sweets, or break her crockery, or disarrange her furniture, therefore she does not care. But I advise you as a little boy, and still more when you grow up to be a man, not to get that fancy into your head ; for you will find that, however good-natured and patient Madam How is in most matters, her keeping silence and not seeming to see you is no sign that she has forgotten. On the contrary, she bears a grudge (if one may so say, with all respect to her) longer than any one else does ; because she will always have her own again. Indeed, I sometimes think that if it were not for Lady Why, her mistress, she might bear some of her grudges for ever and ever. I have seen men ere now damage some of Madam How's property when they were little boys, and be punished by her all their lives long, even though she

had mended the broken pieces, or turned them to some other use. Therefore I say to you, Beware of Madam How. She will teach you more kindly, patiently, and tenderly than any mother, if you want to learn her trade. But if, instead of learning her trade, you damage her materials and play with her tools, beware lest she has her own again out of you.

Some people think, again, that Madam How is not only stupid, but ill-tempered and cruel; that she makes earthquakes and storms, and famine and pestilences, in a sort of blind passion, not caring where they go or whom they hurt; quite heedless of who is in the way, if she wants to do anything or go anywhere. Now, that Madam How can be very terrible there can be no doubt: but there is no doubt also that, if people choose to learn, she will teach them to get out of her way whenever she has business to do which is dangerous to them. But as for her being cruel and unjust, those may believe it who like. You, my dear boys and girls, need not believe it, if you will only trust to Lady Why; and be sure that Why is the mistress and How the servant, now and for ever. That Lady Why is utterly good and kind I know full well; and I believe that, in her case too, the old proverb holds, "Like mistress, like servant;" and that the more we know of Madam How, the more we shall be content with her, and ready to submit to whatever she does: but not with that stupid resignation which some folks preach who do not believe in Lady Why. That is no resignation at all. That is merely saying

"What can't be cured
Must be endured,"

like a donkey when he turns his tail to a hail-storm. But the true resignation, the resignation which is fit for grown people and children alike, the resignation which is the beginning and the end of all wisdom and all religion, is to believe that Lady Why knows best, because she herself is perfectly good; and that as she is mistress over Madam How, so she has a Master over her, whose name—I say again—I leave you to guess.

So now that I have taught you not to be afraid of Madam How, we will go and watch her at her work; and

if we do not understand anything we see, we will ask her questions. She will always show us one of her lesson books if we give her time. And if we have to wait some time for her answer, you need not fear catching cold, though it is November ; for she keeps her lesson books scattered about in strange places, and we may have to walk up and down that hill more than once before we can make out how she makes the glen.

Well—how was the glen made? You shall guess it if you like, and I will guess too. You think, perhaps, that an earthquake opened it?

My dear child, we must look before we guess. Then, after we have looked a little, and got some grounds for guessing, then we may guess. And you have no ground for supposing there ever was an earthquake here strong enough to open that glen. There may have been one : but we must guess from what we do know, and not from what we do not.

Guess again. Perhaps it was there always, from the beginning of the world? My dear child, you have no proof of that either. Everything round you is changing in shape daily and hourly, as you will find out the longer you live ; and therefore it is most reasonable to suppose that this glen has changed its shape, as everything else on earth has done. Besides, I told you not that Madam How had made the glen, but that she was making it, and as yet has only half finished. That is my first guess ; and my next guess is that water is making the glen—water, and nothing else.

You open your young eyes. And I do not blame you. I looked at this very glen for fifteen years before I made that guess ; and I have looked at it some ten years since, to make sure that my guess held good. For man after all is very blind, my dear boy, and very stupid, and cannot see what lies under his own feet all day long ; and if Lady Why, and He whom Lady Why obeys, were not very patient and gentle with mankind, they would have perished off the face of the earth long ago, simply from their own stupidity. I, at least, was very stupid in this case : for I had my head full of earthquakes, and convulsions of nature, and all sorts of prodigies which never happened to this glen ; and so, while I was trying to find what was

not there, I of course found nothing. But when I put them all out of my head, and began to look for what was there, I found it at once : and lo and behold ! I had seen it a thousand times before, and yet never learnt anything from it, like a stupid man as I was ; though what I learnt you may learn as easily as I did.

And what did I find ?

The pond at the bottom of the glen.

You know that pond, of course ? You don't need to go there ? Very well. Then if you do, do not you know also that the pond is always filling up with sand and mud ; and that though we clean it out every three or four years, it always fills again ? Now where does that sand and mud come from !

Down that stream, of course, which runs out of this bog. You see it coming down every time there is a flood, and the stream fouls.

Very well. Then, said Madam How to me, as soon as I recollected that, " Don't you see, you stupid man, that the stream has made the glen, and the earth which runs down the stream was all once part of the hill on which you stand ? " I confess I was very much ashamed of myself when she said that. For that is the history of the whole mystery. Madam How is digging away with her soft spade, water. She has a harder spade, or rather plough, the strongest and most terrible of all ploughs ; but that, I am glad to say, she has laid by in England here.

Water ? But water is too simple a thing to have dug out all this great glen.

My dear child, the most wonderful part of Madam How's work is, that she does such great things, and so many different things, with one and the same tool, which looks to you so simple, though it really is not so. Water, for instance, is not a simple thing, but most complicated : and we might spend hours in talking about water, without having come to the end of its wonders. Still Madam How is a great economist, and never wastes her materials. She is like the sailor who boasted (only she never boasts) that, if he had but a long life and a strong knife, he would build St. Paul's Cathedral before he was done. And Madam How has a very long life, and plenty of time ;

and one of the strongest of all her tools is water. Now if you will stoop down and look into the heather, I will show you how she is digging out the glen with this very mist which is hanging about our feet. At least, so I guess.

For see how the mist clings to the points of the heather leaves, and makes drops. If the hot sun came out the drops would dry, and they would vanish into the air in light warm steam. But now that it is dark and cold, they drip, or run down the heather stems, to the ground. And whither do they go then? Whither will the water go,—hundreds of gallons of it perhaps,—which has dripped and run through the heather in this single day? It will sink into the ground, you know. And then what will become of it? Madam How will use it as an underground spade: just as she uses the rain (at least when it rains too hard, and therefore the rain runs off the moor instead of sinking into it) as a spade above ground.

Now come to the edge of the glen, and I will show you the mist that fell yesterday, perhaps, coming out of the ground again, and hard at work.

You know of what an odd, and indeed of what a pretty form all these glens are: how the flat moor ends suddenly in a steep rounded bank, almost like the crest of a wave—ready like a wave-crest to fall over, and as you know, falling over sometimes, bit by bit, where the soil is bare.

Oh, yes; you are very fond of those banks. It is awfully “jolly,” as you say, scrambling up and down them, in the deep heath and fern; besides, there are plenty of rabbit-holes there, because they are all sand; while these are no rabbit-holes on the flat above, because it is all gravel. Yes; you know all about it: but you know, too, that you must not go too far down these banks, much less roll down them, because there is almost certain to be a bog at the bottom, lying upon a gentle slope, and there you get wet through.

All round these hills, from here to Aldershot in one direction, and from here to Windsor in another, you see the same shaped glens; the wave-crest along their top and at the foot of the crest a line of springs which run out over the slopes, or well up through them in deep sand-galls, as you call them—shaking quagmires which

are sometimes deep enough to swallow up a horse, and which you love to dance upon in summer-time. Now the water of all these springs is nothing but the rain, and mist, and dew, which has sunk down first through the peaty soil, and then through the gravel and sand, and there has stopped. And why? Because under the gravel (about which I will tell you a strange story one day) and under the sand, which is what the geologists call the Upper Bagshot sand, there is an entirely different set of beds, which geologists call the Bracklesham beds, from a place near the New Forest; and in those beds there is a vein of clay; and through that clay the water cannot get, as you have seen yourself when we dug it out in the field below to puddle the pond-head, and very good fun you thought it, and a very pretty mess you made of yourself. Well: because the water cannot get through this clay, and must go somewhere, it runs out continually along the top of the clay, and as it runs undermines the bank, and brings down sand and gravel continually for the next shower to wash into the stream below.

Now think for one moment how wonderful it is that the shape of these glens, of which you are so fond, was settled by the particular order in which Madam How laid down the gravel and sand and mud at the bottom of the sea, ages and ages ago. This is what I told you, that the least thing that Madam How does to-day may take effect hundreds and thousands of years hence.

But I must tell you I think there was a time when this glen was of a very different shape from what it is now; and I daresay, according to your notions, of a much prettier shape. It was once just like one of those Chines which we used to see at Bournemouth. You recollect them? How there was a narrow gap in the cliff of striped sands and gravels, and out of the mouth of that gap, only a few feet across, there poured down a great slope of mud and sand the shape of half a bun, some wet and some dry, up which we used to scramble and get into the Chine, and call the Chine what it was in the truest sense Fairyland. You recollect how it was all eaten out into mountain ranges, pinnacles, steep cliffs of white, and yellow, and pink, standing up against the clear blue sky; till we agreed that, putting aside the difference of size, they were

beautiful and grand as any Alps we had ever seen in pictures. And how we saw (for there could be no mistake about it there) that the Chine was being hollowed out by the springs which broke out high up the cliff, and by the rain which wore the sand into furrowed pinnacles and peaks. You recollect the beautiful place, and how, when we looked back down upon it, we saw between the miniature mountain walls the bright blue sea, and heard it murmur on the sands outside. So I verily believe we might have done, if we had stood somewhere at the bottom of this glen thousands of years ago. We should have seen the sea in front of us ; or rather, an arm of the sea ; for Finchampstead ridges opposite, instead of being covered with farms, and woodlands, and purple heath above, would have been steep cliffs of sand and clay, just like those you see at Bournemouth now ; and —what would have spoilt somewhat the beauty of the sight—along the shores there would have floated, at least in winter, great blocks and floes of ice, such as you might have seen in the tide-way at King's Lynn the winter before last, growling and crashing, grubbing and ploughing the sand and the gravel, and the mud, and sweeping them away into seas towards the North, which are now all fruitful land. That may seem to you like a dream ; yet it is true ; and some day, when we have another talk with Madam How, I will show even a child like you that it was true.

But what could change the beautiful Chine like that at Bournemouth into a wide sloping glen like this Bracknell's Bottom, with a wood like Coombs' many acres large in the middle of it? Well now, think. It is a capital plan for finding out Madam How's secrets, to see what she might do in one place, and explain by it what she has done in another. Suppose now, Madam How had orders to lift up the whole coast of Bournemouth only twenty or even ten feet higher out of the sea than it is now. She could do that easily enough, for she has been doing so on the coast of South America for ages ; she has been doing so this very summer in what hasty people would call a hasty, and violent, and ruthless way : though I shall not say so ; for I believe that Lady Why knows best. She is doing so now steadily on the west coast of

Norway, which is rising quietly—all that vast range of mountain wall and iron-bound cliff at the rate of some four feet in a hundred years, without making the least noise or confusion, or even causing an extra ripple on the sea ; so light and gentle, when she will, can Madam How's strong finger be.

Now, if the mouth of that Chine at Bournemouth was lifted twenty feet out of the sea, one thing would happen,—that the high tide would not come up any longer, and wash away the cake of dirt at the entrance, as we saw it do so often. But if the mud stopped there, the mud behind it would come down more slowly, and lodge inside more and more, till the Chine was half filled up, and only the upper part of the cliffs continue to be eaten away above the level where the springs ran out. So gradually the Chine, instead of being deep and narrow, would become broad and shallow ; and instead of hollowing itself rapidly after every shower of rain, as you saw the Chine at Bournemouth doing, would hollow itself out slowly, as this glen is doing now. And one thing more would happen,—when the sea ceased to gnaw at the foot of the cliffs outside, and to carry away every stone and grain of sand which fell from them, the cliffs would very soon cease to be cliffs ; the rain and the frost would still crumble them down ; but the dirt that fell would lie at their feet, and gradually make a slope of dry land, far out where the shallow sea had been ; and their tops, instead of being steep as now, would become smooth and rounded ; and so at last, instead of two sharp walls of cliff at the Chine's mouth, you might have just what you have here at the mouth of this glen,—our Mount and the Warren Hill,—long slopes with sheets of drifted gravel and sand at their feet, stretching down into what was once an icy sea, and is now the Vale of Blackwater. And this I really believe Madam How has done simply by lifting Hartford Bridge Flat a few more feet out of the sea, and leaving the rest to her trusty tool, the water in the sky.

That is my guess : and I think it is a good guess, because I have asked Madam How a hundred different questions about it in the last ten years, and she always answered them in the same way, saying, "Water, water,

you stupid man." But I do not want you merely to depend on what I say. If you want to understand Madam How, you must ask her questions yourself, and make up your mind yourself like a man, instead of taking things at hearsay or second hand, like the vulgar. Mind, by "the vulgar" I do not mean poor people: I mean ignorant and uneducated people, who do not use their brains rightly, though they may be fine ladies, or kings or popes. The Bible says, "Prove all things: hold fast that which is good." So do you prove my guess, and if it proves good, hold it fast.

And how can I do that?

First, by direct experiment, as it is called. In plain English—go home and make a little Hartford Bridge Flat in the stable-yard; and then ask Mrs. How if she will not make a glen in it like this glen here. We will go home and try that. We will make a great flat cake of clay, and put upon it a cap of sand; and then we will rain upon it out of a watering-pot; and see if Mrs. How does not begin soon to make a glen in the side of the heap, just like those on Hartford Bridge Flat. I believe she will; and certainly, if she does, it will be a fresh proof that my guess is right. And then we will see whether water will not make glens of a different shape than these, if it run over soils of a different kind. We will make a Hartford Bridge Flat turned upside down—a cake of sand with a cap of clay on the top; and we will rain on that out of our watering pot, and see what sort of glens we make then. I can guess what they will be like, because I have seen them—steep overhanging cliffs, with very narrow gullies down them: but you shall try for yourself, and make up your mind whether you think me right or wrong. Meanwhile remember that those gullies too will have been made by water.

And there is another way of "verifying my theory," as it is called; in plain English, seeing if my guess holds good—that is, to look at other valleys—not merely the valleys round here, but valleys in clay, in chalk, in limestone, in the hard slate rock such as you saw in Devonshire—and see whether my guess does not hold good about them too; whether all of them, deep or shallow, broad or narrow, rock or earth, may not have been all

hollowed out by running water. I am sure if you would do this you would find something to amuse you, and something to instruct you, whenever you wish. I know that I do. To me the longest railroad journey, instead of being stupid, is like continually turning over the leaves of a wonderful book, or looking at wonderful pictures of old worlds which were made and unmade thousands of years ago. For I keep looking, not only at the railway cuttings, where the bones of the old worlds are laid bare, but at the surface of the ground; at the plains and downs, banks and knolls, hills and mountains; and continually asking Mrs. How what gave them each its shape: and I will soon teach you to do the same. When you do, I tell you fairly her answer will be in almost every case, "Running water." Either water running when soft, as it usually is, or water running when it is hard—in plain words, moving ice.

About that moving ice, which is Mrs. How's stronger spade, I will tell you some other time; and show you, too, the marks of it in every gravel-pit about here. But now, I see you want to ask a question; and what is it?

Do I mean to say that water has made great valleys, such as you have seen paintings and photographs of,—valleys thousands of feet deep, among mountains thousands of feet high?

Yes, I do. But, as I said before, I do not like you to take my word upon trust. When you are older, you shall go to the mountains, and you shall judge for yourself. Still, I must say that I never saw a valley, however deep, or a cliff, however high, which had not been scooped out by water; and that even the mountain-tops which stand up miles aloft in jagged peaks and pinnacles against the sky were cut out at first, and are being cut and sharpened still, by little else save water, soft and hard; that is, by rain, frost, and ice.

Water, and nothing else, has sawn out such a chasm as that through which the ships run up to Bristol, between Lee Wood and St. Vincent's Rocks. Water, and nothing else, has shaped those peaks of the Matterhorn, or the Weisshorn, or the Pic du Midi of the Pyrenees, of which you have seen sketches and photographs. Just so water might saw out Hartford Bridge Flat, if it had time

enough, into a labyrinth of valleys, and hills, and peaks standing alone ; as it has done already by Ambarrow, and Edgbarrow, and the Folly Hill on the other side of the vale.

I see you are astonished at the notion that water can make Alps. But it was just because I knew you would be astonished at Madam How's doing so great a thing with so simple a tool, that I began by showing you how she was doing the same thing in a small way here upon these flats. For the safest way to learn Madam How's methods is to watch her at work in little corners, at commonplace business, which will not astonish or frighten us, nor put huge hasty guesses and dreams into our heads. Sir Isaac Newton, some will tell you, found out the great law of gravitation, which holds true of all the suns and stars in heaven, by watching an apple fall : and even if he did not find it out so, he found it out, we know, by careful thinking over the plain and commonplace fact, that things have weight. So do you be humble and patient, and watch Madam How at work on little things. For that is the way to see her at work upon all space and time.

What ! you have a question more to ask ?

Oh ! I talked about Madam How lifting up Hartford Bridge Flat. How could she do that ? My dear child, that is a long story ; and I must tell it you some other time. Meanwhile, did you ever see the lid of a kettle rise up and shake when the water inside boiled ? Of course : and of course too, remember that Madam How must have done it. Then think over between this and our next talk, what that can possibly have to do with her lifting up Hartford Bridge Flat. But you have been longing, perhaps, all this time to hear more about Lady Why ; and why she set Madam How to make Bracknell's Bottom.

My dear child, the only answer I dare give to that is ; Whatever other purposes she may have made it for, she made it at least for this—that you and I should come to it this day, and look at it, and talk over it, and become thereby wiser and more earnest, and we will hope more humble and better people. Whatever else Lady Why may wish or not wish, this she wishes always, to make

all men wise and all men good. For what is written of her whom, as in a parable, I have called Lady Why?

"The Lord possessed me in the beginning of His way, before His works of old.

"I was set up from everlasting, from the beginning, or ever the earth was.

"When there were no depths, I was brought forth ; when there were no fountains abounding with water.

"Before the mountains were settled, before the hills was I brought forth :

"While as yet He had not made the earth, nor the fields, nor the highest part of the dust of the world.

"When He prepared the heavens, I was there : when He set a compass upon the face of the depth :

"When He established the clouds above : when He strengthened the fountains of the deep :

"When He gave to the sea His decree, that the waters should not pass His commandment : when He appointed the foundations of the earth :

"Then I was by Him, as one brought up with Him : and I was daily His delight, rejoicing always before Him :

"Rejoicing in the habitable part of His earth ; and my delights were with the sons of men.

"Now therefore hearken unto me, O ye children : for blessed are they that keep my ways."

That we can say, for it has been said for us already. But beyond that we can say, and need say, very little. We were not there, as we read in the Book of Job, when God laid the foundations of the earth. "We see," says St. Paul, "as in a glass darkly, and only know in part." "For who," he asks again, "has known the mind of the Lord, or who hath been His counsellor? . . . For of Him, and through Him, and to Him, are all things : to whom be glory for ever and ever. Amen." Therefore we must not rashly say, this or that is Why a thing has happened ; nor invent what are called "final causes," which are not Lady Why herself, but only our little notions of what Lady Why has done, or rather what we should have done if we had been in her place. It is not, indeed, by thinking that we shall find out anything about Lady Why. She speaks not to our eyes or to our brains, like Madam How, but to that

inner part of us which we call our hearts and spirits, and which will endure when eyes and brain are turned again to dust. If your heart be pure and sober, gentle and truthful, then Lady Why speaks to you without words, and tells you things which Madam How and all her pupils, the men of science, can never tell. When you lie, it may be, on a painful sick-bed, but with your mother's hand in yours; when you sit by her, looking up into her loving eyes; when you gaze out towards the setting sun, and fancy golden capes and islands in the clouds, and seas and lakes in the blue sky, and the infinite rest and peace of the far west sends rest and peace into your young heart, till you sit silent and happy, you know not why; when sweet music fills your heart with noble and tender instincts which need no thoughts or words; ay, even when you watch the raging thunder-storm, and feel it to be, in spite of its great awfulness, so beautiful that you cannot turn your eyes away: at such times as these Lady Why is speaking to your soul of souls, and saying, "My child, this world is a new place, and strange, and often terrible: but be not afraid. All will come right at last. Rest will conquer Restlessness; Faith will conquer Fear; Order will conquer Disorder; Health will conquer Sickness; Joy will conquer Sorrow; Pleasure will conquer Pain; Life will conquer Death; Right will conquer Wrong. All will be well at last. Keep your soul and body pure, humble, busy, pious—in one word, be good: and ere you die, or after you die, you may have some glimpse of Me, the Everlasting Why: and hear with the ears, not of your body but of your spirit, men and all rational beings, plants and animals, ay, the very stones beneath your feet, the clouds above your head, the planets and the suns away in farthest space, singing eternally.

"Thou art worthy, O Lord, to receive glory and honor and power, for Thou hast created all things, and for Thy pleasure they are and were created."

CHAPTER II.

EARTHQUAKES.

So you have been looking at that beautiful drawing of the ruin of Arica in the "Illustrated London News:" and it has puzzled you and made you sad? You want to know why God killed all those people—mothers among them, too, and little children?

Alas, my dear child! who am I that I should answer you that?

Have you done wrong in asking me? No, my dear child; no. You have asked me because you are a human being and a child of God, and not merely a cleverer sort of animal, an ape who can read and write and cast accounts. Therefore it is that you cannot be content, and ought not to be content, with asking how things happen, but must go on to ask why. You cannot be content with knowing the causes of things; and if you knew all the natural science that ever was or ever will be known to men, that would not satisfy you; for it would only tell you the *causes* of things: while your souls want to know the *reasons* of things besides; and though I may not be able to tell you the reasons of things, or show you aught but a tiny glimpse here and there of that which I called the other day the glory of Lady Why, yet I believe that somehow, somewhen, somewhere, you will learn something of the reasons of things. For that thirst to know *why* was put into the hearts of little children by God Himself; and I believe that God would never have given them that thirst if He had not meant to satisfy it.

There—you do not understand me. I trust that you will understand me some day. Meanwhile, I think—I only say I *think*—you know I told you how humble we must be whenever we speak of Lady Why—that we may guess at something like a good reason for the terrible earthquakes in South America. I do not wish to be hard upon poor people in great affliction: but I cannot help thinking

that they have been doing for hundreds of years past something very like what the Bible calls "tempting God"—staking their property and their lives upon the chances of no earthquakes coming, while they ought to have known that an earthquake might come any day. They have fulfilled (and little thought I that it would be fulfilled so soon) the parable that I told you once of the nation of the Do-as-you-likes, who lived careless and happy at the foot of the burning mountain, and would not be warned by the smoke that came out of the top, or by the slag and cinders which lay all about them ; till the mountain blew up, and destroyed them miserably.

Then I think that they ought to have expected an earthquake ?

Well—it is not for us to judge any one, especially if they live in a part of the world in which we have not been ourselves. But I think that we know, and that they ought to have known, enough about earthquakes to have been more prudent than they have been for many a year. At least we will hope that, though they would not learn their lesson till this year, they will learn it now, and will listen to the message which I think Madam How has brought them, spoken in a voice of thunder, and written in letters of flame.

And what is that ?

My dear child, if the landlord of our house was in the habit of pulling the roof down upon our heads, and putting gunpowder under the foundations to blow us up, do you not think we should know what he meant, even though he never spoke a word ? He would be very wrong in behaving so, of course : but one thing would be certain,—that he did not intend us to live in his house any longer if he could help it ; and was giving us, in a very rough fashion, notice to quit. And so it seems to me that these poor Spanish Americans have received from the Landlord of all landlords, who can do no wrong, such a notice to quit as perhaps no people ever had before ; which says to them in unmistakable words, "you must leave this country : or perish." And I believe that that message, like all Lady Why's messages, is at heart a merciful and loving one ; that if these Spaniards would leave the western coast of Peru, and cross the Andes into the green forests of the

eastern side of their own land, they might not only live free from earthquakes, but, (if they would only be good and industrious) become a great, rich, and happy nation, instead of the idle, and useless, and I am afraid not over good, people which they have been. For in that eastern part of their own land God's gifts are waiting for them, in a paradise such as I can neither describe nor you conceive ;—precious woods, fruits, drugs, and what not—boundless wealth, in one word,—waiting for them to send it all down the waters of the mighty river Amazon, enriching us here in the Old World, and enriching themselves there in the New. If they would only go and use these gifts of God, instead of neglecting them as they have been doing for now three hundred years, they would be a blessing to the earth, instead of being—that which they have been.

God grant, my dear child, that these poor people may take the warning that has been sent to them ; “The voice of God revealed in facts,” as the great Lord Bacon would have called it, and see not only that God has bidden them leave the place where they are now, but has prepared for them, in their own land, a home a thousand times better than that in which they now live.

But you ask, How ought they to have known that an earthquake would come ?

Well, to make you understand that, we must talk a little about earthquakes, and what makes them ; and in order to find out that, let us try the very simplest cause of which we can think. That is the wise and scientific plan.

Now, whatever makes these earthquakes must be enormously strong ; that is certain. And what is the strongest thing you know of in the world ? Think.

Gunpowder ?

Well, gunpowder is strong sometimes : but not always. You may carry it in a flask, or in your hand, and then it is weak enough. It only becomes strong by being turned into gas and steam. But steam is always strong. And if you look at a railway engine, still more if you have ever seen—which God forbid you should—a boiler explosion, you would agree with me, that the strongest thing we know of in the world is steam.

Now I think that we can explain almost, if not quite, all that we know about earthquakes, if we believe that on the whole they are caused by steam and other gases expanding, that is, spreading out, with wonderful quickness and strength. Of course there must be something to make them expand, and that is *heat*. But we will not talk of that yet.

Now do you remember that riddle which I put to you the other day?—"What had the rattling of the lid of the kettle to do with Hartford Bridge Flat being lifted out of the ancient sea?"

The answer to the riddle, I believe, is—Steam has done both. The lid of the kettle rattles, because the expanding steam escapes in little jets, and so causes a *lid-quake*. Now suppose that there was steam under the earth trying to escape, and the earth in one place was loose and yet hard, as the lid of the kettle is loose and yet hard, with cracks in it, it may be, like the crack between the edge of the lid and the edge of the kettle itself: might not the steam try to escape through the cracks, and rattle the surface of the earth, and so cause an *earth-quake*?

So the steam would escape generally easily, and would only make a passing rattle, like the earthquake of which the famous jester Charles Selwyn said, that it was quite a young one, so tame that you might have stroked it; like that which I myself once felt in the Pyrenees, which gave me very solemn thoughts after a while, though at first I did nothing but laugh at it; and I will tell you why.

I was travelling in the Pyrenees; and I came one evening to the loveliest spot; a glen, or rather a vast crack, in the mountains, so narrow that there was no room for anything at the bottom of it, save a torrent roaring between walls of polished rock. High above the torrent the road was cut out among the cliffs, and above the road rose more cliffs, with great black cavern mouths, hundreds of feet above our heads, out of each of which poured in foaming waterfalls streams large enough to turn a mill, and above them mountains piled on mountains, all covered with wood of box, which smelt rich and hot and musky in the warm spring air. Among the box-trees and fallen boulders grew hepaticas, blue and white and red, such as you see in the garden; and little stars of gentian,

more azure than the azure sky. But out of the box-woods above rose giant silver firs, clothing the cliffs and glens with tall black spires, till they stood out at last in a jagged saw-edge against the purple evening sky, along the mountain ranges, thousands of feet aloft; and beyond of them again, at the head of the valley, rose vast cones of virgin snow, miles away in reality, but looking so brilliant and so near that one fancied at the first moment that one could have touched them with one's hand. Snow-white they stood, the glorious things, seven thousand feet into the air; and I watched their beautiful white sides turn rose-color in the evening sun, and, when he set, fade into dull cold gray, till the bright moon came out to light them up once more. When I was tired of wondering and admiring, I went into bed; and there I had a dream—such a dream as Alice had when she went into Wonderland—such a dream as I dare say you may have had ere now. Some noise or stir puts into your fancy as you sleep a whole long dream to account for it; and yet that dream, which seems to you to be hours long, has not taken up a second of time; for the very same noise which begins the dream, wakes you at the end of it: and so it was with me. I dreamed that some English people had come into the hotel where I was, and were sleeping in the room underneath me; and that they had quarrelled and fought, and broke their bed down with a tremendous crash, and that I must get up, and stop the fight; and at that moment I woke and heard coming up the valley from the north such a roar as I never heard before or since; as if a hundred railway trains were rolling underground; and just as it passed under my bed there was a tremendous thump, and I jumped out of bed quicker than I ever did in my life, and heard the roaring sound die away as it rolled up the valley towards the peaks of snow. Still I had in my head this notion of the Englishmen fighting in the room below. But then I recollected that no Englishmen had come in the night before, and that I had been in the room below, and that there was no bed in it. Then I opened my window—a woman screamed, a dog barked, some cocks and hens cackled in a very disturbed humor, and then I could hear nothing but the roaring of the torrent a hundred feet below. And then it flashed across me what all

the noise was about ; and I burst out laughing, and said, "It is only an earthquake ;" and went to bed again.

Next morning I inquired whether any one had heard a noise. No, nobody had heard anything. And the driver who had brought me up the valley only winked, but did not choose to speak. At last at breakfast I asked the pretty little maid who waited what was the meaning of the noise I heard in the night, and she answered, to my intense amusement, "Ah ! bah ! ce n'était qu'un tremblement de terre ; il y en a ici toutes les six semaines." Now the secret was out. The little maid, I found, came from the lowland far away, and did not mind telling the truth : but the good people of the place were afraid to let out that they had earthquakes every six weeks, for fear of frightening visitors away : and because they were really very good people, and very kind to me, I shall not tell you what the name of the place is.

Of course after that I could do no less than ask Madam How, very civilly, how she made earthquakes in that particular place, hundreds of miles away from any burning mountain ? And this was the answer I *thought* she gave, though I am not so conceited as to say I am sure.

As I had come up the valley I had seen that the cliffs were all beautiful gray limestone marble ; but just at this place they were replaced by granite, such as you may see in London Bridge or at Aberdeen. I do not mean that the limestone changed to granite, but that the granite had risen up out of the bottom of the valley, and had carried the limestone (I suppose) up on its back hundreds of feet into the air. Those caves with the waterfalls pouring from their mouths were all on one level, at the top of the granite, and the bottom of the limestone. That was to be expected ; for, as I will explain to you some day, water can make caves easily in limestone : but never, I think, in granite. But I knew that beside these cold springs which came out of the caves, there were hot springs also, full of curious chemical salts, just below the very house where I was in. And when I went to look at them, I found that they came out of the rock just where the limestone and the granite joined. "Ah," I said, "now I think I have Madame How's answer. The lid of one of her great steam boilers is rather shaky and cracked just

here, because the granite has broken and torn the limestone as it lifted it up ; and here is the hot water out of the boiler actually oozing out of the crack ; and the earthquake I heard last night was simply the steam rumbling and thumping inside, and trying to get out."

And then my dear child, I fell into a more serious mood. I said to myself, " If that steam had been a little, only a little stronger ; or if the rock above it had been only a little weaker, it would have been no laughing matter then ; the village might have been shaken to the ground ; the rocks hurled into the torrent ; jets of steam and of hot water, mixed, it may be, with deadly gases, have roared out of the riven ground ; that might have happened here, in short, which has happened and happens still in a hundred places in the world, whenever the rocks are too weak to stand the pressure of the steam below, and the solid earth bursts, as an engine boiler bursts when the steam within it is too strong." And when those thoughts came into my mind, I was in no humor to jest any more about " young earthquakes," or " Madam How's boilers ?" but rather to say with the wise man of old, " It is of the Lord's mercies that we are not consumed."

Most strange, but most terrible also, are the tricks which this underground steam plays. It will make the ground, which seems to us so hard and firm, roll and rock in waves, till people are sea-sick, as on board a ship ; and that rocking motion (which is the most common) will often, when it is but slight, set the bells ringing in the steeples, or make the furniture and things on shelves, jump about quaintly enough. It will make trees bend to and fro, as if a wind was blowing through them ; open doors suddenly, and shut them again with a slam ; make the timbers of the floors and roofs creak, as they do in a ship at sea ; or give men such frights as one of the dock-keepers at Liverpool got, in the earthquake in 1863, when his watchbox rocked so, that he thought some one was going to pitch him over into the dock. But these are only little hints and warnings of what it can do. When it is strong enough, it will rock down houses and churches into heaps of ruins, or, if it leaves them standing, crack them from top to bottom, so that they must be pulled down and rebuilt.

You saw those pictures of the ruins of Arica, about which our talk began ; and from them you can guess well enough for yourself what a town looks like which has been ruined by an earthquake. Of the misery and the horror which follow such a ruin I will not talk to you, nor darken your young spirit with sad thoughts which grown people must face, and ought to face. But the strangeness of some of the tricks which the earthquake shocks play is hardly to be explained, even by scientific men. Sometimes, it would seem, the force runs round, making the solid ground eddy, as water eddies in a brook. For it will make straight rows of trees crooked ; it will twist whole walls round—or rather the ground on which the walls stand—without throwing them down ; it will shift the stones of a pillar one on the other sideways, as if a giant had been trying to spin it like a teetotum, and so screwed it half in pieces. There is a story told by a wise man, who saw the place himself, of the whole furniture of one house being hurled away by an earthquake, and buried under the ruins of another house ; and of things carried hundreds of yards off, so that the neighbors went to law to settle who was the true owner of them. Sometimes, again, the shock seems to come neither horizontally in waves, nor circularly in eddies, but vertically, that is, straight up from below ; and then things—and people, alas ! sometimes—are thrown up off the earth high into the air, just as things spring up off the table, if you strike it smartly enough underneath. By that same law (for there is a law for every sort of motion) it is that the earthquake shock sometimes hurls great rocks off a cliff into the valley below. The shock runs through the mountain till it comes to the cliff at the end of it ; and then the face of the cliff, if it be at all loose, flies off into the air. You may see the very same thing happen, if you will put marbles or billiard-balls in a row touching each other, and strike the one nearest you smartly in the line of the row. All the balls stand still, except the last one ; and that flies off. The shock, like the earthquake shock, has run through them all ; but only the end one, which had nothing beyond it but soft air, has been moved ; and when you grow older, and learn mathematics, you will know the law of motion according to which that happens,

and learn to apply what the billiard-balls have taught you, to explain the wonders of an earthquake. For in this case, as in so many more, you must watch Madam How at work on little and common things, to find out how she works in great and rare ones. That is why Solomon says that "a fool's eyes are in the ends of the earth," because he is always looking out for strange things which he has not seen, and which he could not understand if he saw ; instead of looking at the petty commonplace matters which are about his feet all day long, and getting from them sound knowledge, and the art of getting more sound knowledge still.

Another terrible destruction which the earthquake brings, when it is close to the seaside, is the wash of a great sea wave, such as swept in last year upon the island of St. Thomas, in the West Indies ; such as swept in upon the coast of Peru this year. The sea moans, and sinks back, leaving the shore dry ; and then comes in from the offing a mighty wall of water, as high as, or higher than, many a tall house ; sweeps far inland, washing away quays and houses, and carrying great ships in with it ; and then sweeps back again, leaving the ships high and dry, as ships were left in Peru this year.

Now, how is that wave made ? Let us think. Perhaps in many ways. But two of them I will tell you as simply as I can, because they seem the most likely, and probably the most common.

Suppose, as the earthquake shock ran on, making the earth under the sea heave and fall in long earth-waves, the sea-bottom sank down. Then the water on it would sink down too, and leave the shore dry ; till the sea bottom rose again, and hurled the water up again against the land. This is one way of explaining it, and it may be true. For certain it is, that earthquakes do move the bottom of the sea ; and certain, too, that they move the water of the sea also, and with tremendous force. For ships at sea during an earthquake feel such a blow from it (though it does them no harm) that the sailors often rush upon deck, fancying that they have struck upon a rock ; and the force which could give a ship, floating in water, such a blow as that, would be strong enough to hurl thousands of tons of water up the beach, and on to the land.

But there is another way of accounting for this great sea-wave, which I fancy comes true sometimes.

Suppose you put an empty india-rubber ball into water, and then blew into it through a pipe. Of course, you know as the ball filled, the upper side of it would rise out of the water. Now, suppose there were a party of little ants moving about upon that ball, and fancying it a great island, or perhaps the whole world—what would they think of the ball's filling and growing bigger?

If they could see the sides of the basin or tub in which the ball was, and were sure that they did not move, then they would soon judge by them that they themselves were moving, and that the ball was rising out of the water. But if the ants were so short-sighted that they could not see the sides of the basin, they would be apt to make a mistake, because they would then be like men on an island out of sight of any other land. Then it would be impossible further to tell whether they were moving up, or whether the water was moving down; whether their ball was rising out of the water, or the water was sinking away from the ball. They would probably say, "The water is sinking, and leaving the ball dry."

Do you understand that? Then think what would happen, if you pricked a hole in the ball. The air inside would come hissing out, and the ball would sink again into the water. But the ants would probably fancy the very opposite. Their little heads would be full of the notion that the ball was solid, and could not move, just as our heads are full of the notion that the earth is solid, and cannot move; and they would say, "Ah! here is the water rising again." Just so, I believe, when the sea seems to ebb away during the earthquake, the land is really being raised out of the sea, hundreds of miles of coast, perhaps, or a whole island, at once, by the force of the steam and gas imprisoned under the ground. That steam stretches and strains the solid rocks below, till they can bear no more, and snap, and crack, with frightful roar and clang; then out of holes and chasms in the ground rush steam, gases—often foul and poisonous ones—hot water, mud, flame, strange stones—all signs that the great boiler down below has burst at last.

Then the strain is eased. The earth sinks together

again, as the ball did when it was pricked ; and sinks lower, perhaps, than it was before : and back rushes the sea, which the earth had thrust away while it rose, and sweeps in, destroying all before it.

Of course, there is a great deal more to be said about all this : but I have no time to tell you now. You will read it, I hope, for yourselves when you grow up, in the writings of far wiser men than I. Or perhaps you may feel for yourselves in foreign lands the actual shock of a great earthquake, or see its work fresh done around you. And if ever that happens, and you be preserved during the danger, you will learn for yourself, I trust, more about earthquakes than I can teach you, if you will only bear in mind the simple general rules for understanding the “how” of them which I have given you here.

But you do not seem satisfied yet? What is that you want to know?

Oh! There was an earthquake here in England the other night, while you were asleep; and that seems to you too near to be pleasant. Will there ever be earthquakes in England which will throw houses down, and bury people in the ruins?

My dear child, I think you may set your heart at rest upon that point. As far as the history of England goes back, and that is more than a thousand years, there is no account of any earthquake which has done any serious damage, or killed, I believe, a single human being. The little earthquakes which are sometimes felt in England run generally up one line of country, from Devonshire through Wales, and up the Severn valley into Cheshire and Lancashire, and the south-west of Scotland ; and they are felt more smartly there, I believe, because the rocks are harder there than here, and more tossed about by earthquakes which happened ages and ages ago, long before men lived on the earth. I will show you the work of these earthquakes some day, in the tilting and twisting of the layers of rock, and in the cracks (*faults*, as they are called) which run through them in different directions. I showed you some once, if you recollect, in the chalk cliff at Ramsgate—two sets of cracks, sloping opposite ways, which I told you were made by two separate sets of

earthquakes, long, long ago, perhaps while the chalk was still at the bottom of a deep sea. But even in the rocky parts of England the earthquake-force seems to have all but died out. Perhaps the crust of the earth has become too thick and solid there to be much shaken by the gases and steam below. In this eastern part of England, meanwhile, there is but little chance that an earthquake will ever do much harm, because the ground here, for thousands of feet down, is not hard and rocky, but soft—sands, clays, chalk, and sands again; clays, soft limestones, and clays again—which all act as buffers to deaden the earthquake shocks, and deaden too, the earthquake noise.

And how?

Put your ear to one end of a soft bolster, and let some one hit the other end. You will hear hardly any noise, and will not feel the blow at all. Put your ear to one end of a hard piece of wood, and let some one hit the other. You will hear a smart tap; and perhaps feel a smart tap, too. When you are older, and learn the laws of sound, and of motion among the particles of bodies, you will know why. Meanwhile you may comfort yourself with the thought that Madam How has (doubtless by command of Lady Why) prepared a safe soft bed for this good people of Britain—not that they may lie and sleep on it, but work and till, plant and build and manufacture, and thrive in peace and comfort, we will trust and pray, for many a hundred years to come. All that the steam inside the earth is likely to do to us, is to raise parts of this island (as Hartford Bridge Flats were raised, ages ago, out of the old icy sea) so slowly, probably, that no man can tell whether they are rising or not. Or again, the steam-power may be even now dying out under our island, and letting parts of it sink slowly into the sea, as some wise friends of mine think that the fens in Norfolk and Cambridgeshire are sinking now. I have shown you where that kind of work has gone on in Norfolk; how the brow of Sandringham Hill was once a sea-cliff, and Dersingham Bog at its foot a shallow sea; and therefore that the land has risen there. How, again, at Hunsanton Station there is a beach of sea-shells twenty feet above high-water mark, showing that the land has risen

there likewise. And how, further north again, at Brancaster, there are forests of oak, and fir, and alder, with their roots still in the soil, far below high-water mark, and only uncovered at low tide; which is a plain sign that there the land has sunk. You surely recollect the sunken forest at Brancaster, and the beautiful shells we picked up in its gullies, and the millions of live *Pholases* boring into the clay and peat which once was firm dry land, fed over by giant oxen, and giant stags likewise, and perhaps by the mammoth himself, the great woolly elephant whose teeth the fishermen dredge up in the sea outside? You recollect that? Then remember that as that Norfolk shore has changed, so slowly but surely is the whole world changing around us. Hartford Bridge Flat here, for instance, how has it changed! Ages ago it was the gravelly bottom of a sea. Then the steam-power underground raised it up slowly, through long ages, till it became dry land. And ages hence, perhaps, it will have become a sea-bottom once more. Washed slowly by the rain, or sunk by the dying out of the steam-power underground, it will go down again to the place from whence it came. Seas will roll where we stand now, and new lands will rise where seas now roll. For all things on this earth, from the tiniest flower to the tallest mountain, change, and change all day long. Every atom of matter moves perpetually; and nothing "continues in one stay." The solid-seeming earth on which you stand is but a heaving bubble, bursting ever and anon in this place and in that. Only above all, and through all, and with all, is One who does not move nor change, but is the same yesterday, to-day, and for ever. And on Him, my child, and not on this bubble of an earth, do you and I, and all mankind, depend.

But I have not yet told you why the Peruvians ought to have expected an earthquake. True. I will tell you another time.

CHAPTER III.

VOLCANOES.

You want to know why the Spaniards in Peru and Ecuador should have expected an earthquake.

Because they had so many already. The shaking of the ground in their country had gone on perpetually, till they had almost ceased to care about it, always hoping that no very heavy shock would come ; and being, now and then, terribly mistaken.

For instance, in the province of Quito, in the year 1797, from thirty to forty thousand people were killed at once by an earthquake. One would have thought that warning enough : but the warning was not taken : and now, this very year, thousands more have been killed in the very same country, in the very same way.

They might have expected as much. For their towns are built, most of them, close to volcanoes—some of the highest and most terrible in the world. And wherever there are volcanoes there will be earthquakes. You may have earthquakes without volcanoes, now and then ; but volcanoes without earthquakes, seldom or never.

How does that come to pass ? Does a volcano make earthquakes ? No ; we may rather say that earthquakes are trying to make volcanoes. For volcanoes are the holes which the steam under ground has burst open that it may escape into the air above. They are the chimneys of the great blast furnaces underground, in which Madam How pounds and melts up the old rocks, to make them into new ones, and spread them out over the land above.

And are there many volcanoes in the world ? You have heard of Vesuvius, of course, in Italy ; and Etna, in Sicily ; and Hecla, in Iceland. And you have heard, too, of Kilauea, in the Sandwich Islands, and of Pele's Hair—the yellow threads of lava, like fine spun glass, which are

blown from off its pools of fire and which the Sandwich Islanders believed to be the hair of a goddess who lived in the crater;—and you have read, too, I hope, in Miss Yonge's "*Book of Golden Deeds*," the noble story of the Christian chieftainess who, in order to persuade her subjects to become Christians also, went down into the crater and defied the goddess of the volcano, and came back unhurt and triumphant.

But if you look at the map, you will see that there are many, many more. Get Keith Johnston's *Physical Atlas* from the schoolroom—of course it is there (for a schoolroom without a physical atlas is like a needle without an eye)—and look at the map which is called "*Phenomena of Volcanic Action*."

You will see in it many red dots, which mark the volcanoes which are still burning; and black dots, which mark those which have been burning at some time or other, not very long ago, scattered about the world. Sometimes they are single, like the red dot at Otaheite, or at Easter Island in the Pacific. Sometimes they are in groups, or clusters, like the cluster at the Sandwich Islands, or in the Friendly Islands, or in New Zealand. And if we look in the Atlantic, we shall see four clusters; one in poor half-destroyed Iceland, in the far north, one in the Azores, one in the Canaries, and one in the Cape de Verds. And there is one dot in those Canaries which we must not overlook, for it is no other than the famous Peake of Teneriffe, a volcano which is hardly burnt out yet, and may burn up again any day, standing up out of the sea more than 12,000 feet high still, and once it must have been double that height. Some think that it is perhaps the true Mount Atlas, which the old Greeks named when first they ventured out of the Straits of Gibraltar down the coast of Africa, and saw the great peak far to the westward, with the clouds cutting off its top; and said that it was a mighty giant, the brother of the Evening Star, who held up the sky upon his shoulders, in the midst of the Fortunate Islands, the gardens of the daughter of the Evening Star, full of strange golden fruits; and that Perseus had turned him into stone, when he passed him with the Gorgon's head.

But you will see, too, that most of these red and black

dots run in crooked lines ; and that many of the clusters run in lines likewise.

Look at one line : by far the largest on the earth. You will learn a good deal of geography from it.

The red dots begin at a place called the Terribles, on the east side of the Bay of Bengal. They run on, here and there, along the islands of Sumatra and Java, through the Spice Islands ; and at New Guinea the line of red dots forks. One branch runs south-east, through islands whose names you never heard, to the Friendly Islands, and to New Zealand. The other runs north, through the Philippines, through Japan, through Kamschatka ; and then there is a little break of sea, between Asia and America : but beyond it, the red dots begin again in the Aleutian Islands, and then turn down the whole west coast of America, down from Mount Elias (in what was, till lately, Russian America) towards British Columbia. Then, after a long gap, there are one or two in Lower California (and we must not forget the terrible earthquake which has just shaken San Francisco, between those two last places) ; and when we come down to Mexico we find the red dots again plentiful, and only too plentiful ; for they mark the great volcanic line of Mexico, of which you will read, I hope, some day, in Humboldt's works. But the line does not stop there. After the little gap of the Isthmus of Panama, it begins again in Quito, the very country which has just been shaken, and in which stand the huge volcanoes Chimborazo, Pasto, Antisana, Cotopaxi, Pichincha, Tunguragua—smooth cones from 15,000 to 20,000 feet high, shining white with snow, till the heat inside melts it off, and leaves the cinders of which the peaks are made all black and ugly among the clouds, ready to burst in smoke and fire. South of them again, there is a long gap, and then another line of red dots—Arequiba, Chipicani, Gualatieri, Atacama—as high as or higher than those in Quito : and this, remember, is the other country which has just been shaken. On the sea shore below those volcanoes stood the hapless city of Arica, whose ruins we saw in the picture. Then comes another gap ; and then a line of more volcanoes in Chili, at the foot of which happened that fearful earthquake of 1835 (besides many more) of which you will read some

day in that noble book "*The Voyage of the Beagle*," and so the line of dots runs down to the southernmost point of America.

What a line we have traced! Long enough to go round the world if it were straight. A line of holes out of which steam, and heat, and cinders, and melted stones are rushing up, perpetually, in one place and another. Now the holes in this line which are near each other have certainly something to do with each other. For instance, when the earth shook the other day round the volcanoes of Quito, it shook also round the volcanoes of Peru, though they were 600 miles away. And there are many stories of earthquakes being felt, or awful underground thunder heard, while volcanoes were breaking out hundreds of miles away. I will give you a very curious instance of that.

If you look at the West Indies on the map, you will see a line of red dots runs through the Windward Islands: there are two volcanoes in them, one in Guadaloupe, and one in St. Vincent (I will tell you a curious story, presently, about that last), and little volcanoes (if they have ever been real volcanoes at all), which now only send out mud, in Trinidad. There the red dots stop: but then begins along the north coast of South America a line of mountain country called Cumana, and Caraccas, which has often been horribly shaken by earthquakes. Now once, when the volcano in St. Vincent began to pour out a vast stream of melted lava, a noise like thunder was heard underground, over thousands of square miles beyond those mountains, in the plains of Calabozo, and on the banks of the Apure, more than 600 miles away from the volcano—a plain sign that there was something underground which joined them together, perhaps a long crack in the earth. Look for yourselves at the places, and you will see that (as Humboldt says) it is as strange as if an eruption of Mount Vesuvius was heard in the north of France.

So it seems as if these lines of volcanoes stood along cracks in the rind of the earth, through which the melted stuff inside was for ever trying to force its way; and that, as the crack got stopped up in one place by the melted stuff cooling and hardening again into stone, it was burst

in another place, and a fresh volcano made, or an old one re-opened.

Now we can understand why earthquakes should be most common round volcanoes; and we can understand, too, why they would be worst before a volcano breaks out, because then the steam is trying to escape; and we can understand, too, why people who live near volcanoes are glad to see them blazing and spouting, because then they have hope that the steam has found its way out, and will not make earthquakes any more for a while. But still that is merely foolish speculation on chance. Volcanoes can never be trusted. No one knows when one will break out, or what it will do; and those who live close to them—as the city of Naples is close to Mount Vesuvius—must not be astonished if they are blown up or swallowed up, as that great and beautiful city of Naples may be without a warning, any day.

For what happened to that same Mount Vesuvius nearly 1800 years ago, in the old Roman times? For ages and ages it had been lying quiet, like any other hill. Beautiful cities were built at its foot, filled with people who were as handsome, and as comfortable, and (I am afraid) as wicked, as people ever were on earth. Fair gardens, vineyards, oliveyards, covered the mountain slopes. It was held to be one of the Paradises of the world. As for the mountain's being a burning mountain, who ever thought of that? To be sure, on the top of it was a great round crater, or cup, a mile or more across, and a few hundred yards deep. But that was all overgrown with bushes and wild vines, full of boars and deer. What sign of fire was there in that? To be sure, also, there was an ugly place below by the seashore, called the Phlegræan fields, where smoke and brimstone came out of the ground, and a lake called Avernus, over which poisonous gases hung, and which (old stories told) was one of the mouths of the Nether Pit. But what of that? It had never harmed any one, and how could it harm them?

So they all lived on, merrily and happily enough, till, in the year A.D. 79 (that was eight years, you know, after the Emperor Titus destroyed Jerusalem), there was stationed in the Bay of Naples a Roman admiral, called Pliny, who was also a very studious and learned man, and author

of a famous old book on natural history. He was staying on shore with his sister ; and as he sat in his study she called him out to see a strange cloud which had been hanging for some time over the top of Mount Vesuvius. It was in shape just like a pine tree ; not, of course, like one of our branching Scotch firs here, but like an Italian stone pine, with a long straight stem and a flat parasol-shaped top. Sometimes it was blackish, sometimes spotted ; and the good Admiral Pliny, who was always curious about natural science, ordered his cutter and went away across the bay to see what it could be. Earthquake shocks had been very common for the last few days : but I do not suppose that Pliny had any notion that the earthquakes and the cloud had aught to do with each other. However, he soon found out that they had ; and to his cost. When he got near the opposite shore some of the sailors met him and entreated him to turn back. Cinders and pumice-stones were falling down from the sky, and flames breaking out of the mountain above. But Pliny would go on : he said that if people were in danger it was his duty to help them ; and that he must see this strange cloud, and note down the different shapes into which it changed. But the hot ashes fell faster and faster ; the sea ebbed out suddenly, and left them nearly dry, and Pliny turned away to a place called Stabiæ, to the house of his friend Pomponianus, who was just going to escape in a boat. Brave Pliny told him not to be afraid ; ordered his bath like a true Roman gentleman ; and then went into dinner with a cheerful face. Flames came down from the mountain, nearer and nearer as the night drew on : but Pliny persuaded his friend that they were only fires in some villages from which the peasants had fled ; and then went to bed and slept soundly. However, in the middle of the night they found the courtyard being fast filled with cinders, and, if they had not woken up the Admiral in time, he would never have been able to get out of the house. The earthquake shocks grew stronger and fiercer, till the house was ready to fall ; and Pliny and his friend, and the sailors and the slaves, all fled into the open fields, amid a shower of stones and cinders, tying pillows over their heads to prevent their being beaten down. The day had come by this time : but not

the dawn ; for it was still pitch dark as night. They went down to their boats upon the shore : but the sea raged so horribly, that there was no getting on board of them. Then Pliny grew tired, and made his men spread a sail for him, and lay down on it. But there came down upon them a rush of flames, and a horrible smell of sulphur, and all ran for their lives. Some of the slaves tried to help the Admiral upon his legs : but he sank down again overpowered with the brimstone fumes, and so was left behind. When they came back again, there he lay dead : but with his clothes in order, and his face as quiet as if he had been only sleeping. And that was the end of a brave and learned man ; a martyr to duty and to the love of science.

But what was going on in the meantime ? Under clouds of ashes, cinders, mud, lava, three of those happy cities were buried at once—Herculaneum, Pompeii, Stabiae. They were buried just as the people had fled from them, leaving the furniture and the earthenware, often even jewels and gold, behind, and here and there among them a human being who had not had time to escape from the dreadful deluge of dust. The ruins of Herculaneum and Pompeii have been dug into since ; and the paintings, especially in Pompeii, are found upon the walls still fresh, preserved from the air by the ashes which have covered them in. When you are older, you perhaps will go to Naples, and see in its famous museum the curiosities which have been dug out of the ruined cities ; and you will walk, I suppose, along the streets of Pompeii, and see the wheel-tracks in the pavement, along which carts and chariots rumbled 2,000 years ago. Meanwhile, if you go nearer home, to the Crystal Palace, and to the Pompeian Court, as it is called, you will see an exact model of one of these old buried houses, copied even to the very paintings on the walls ; and judge for yourself, as far as a little boy can judge, what sort of life these thoughtless, luckless people lived 2,000 years ago.

And what had become of Vesuvius, the treacherous mountain ? Half or more than half of the side of the old crater had been blown away ; and what was left, which is now called the Monte Somma, stands in a half circle round the new cone and new crater which is burning at this very day. True, after that eruption which killed

Pliny, Vesuvius fell asleep again, and did not awake for 134 years, and then again for 269 years : but it has been growing more and more restless as the ages have passed on, and now hardly a year passes without its sending out smoke and stones from its crater, and streams of lava from its sides.

And now, I suppose, you will want to know what a volcano is like, and what a cone, and a crater, and lava are?

What a volcano is like, it is easy enough to show you ; for they are the most simply and beautifully shaped of all mountains, and they are alike all over the world, whether they be large or small. Almost every volcano in the world, I believe, is, or has been once, of the shape which you see in the drawing opposite ; even those volcanoes in the Sandwich Islands, of which you have often heard, which are now great lakes of boiling fire upon flat downs, without any cone to them at all. They, I believe, are volcanoes which have fallen in ages ago : just as in Java a whole burning mountain fell in on the night of the 11th of August, in the year 1772. Then, after a short and terrible earthquake, a bright cloud suddenly covered the whole mountain. The people who dwelt around it tried to escape ; but before the poor souls could get away the earth sunk beneath their feet, and the whole mountain fell in, and was swallowed up, with a noise as if great cannon were being fired. Forty villages and nearly 3,000 people were destroyed, and where the mountain had been was only a plain of red-hot stones. In the same way in the year 1698, the top of a mountain in Quito fell in in a single night, leaving only two immense peaks of rock behind, and pouring out great floods of mud mixed with dead fish ; for there are underground lakes among those volcanoes, which swarm with little fish which never see the light.

But most volcanoes, as I say, are, or have been, nearly all of the same shape. The sloping sides of Cotopaxi, in Quito, are made of cinders and ashes, braced together, I suppose, by bars of solid lava-stone inside, which prevent the whole from crumbling down. The upper part, is white with snow, as far down as a line

which is 15,000 feet above the sea. For the mountain is in the tropics, close to the equator, and the snow will not lie in that hot climate any lower down. But now and then the snow melts off, and rushes down the mountain side in floods of water and of mud, and the cindery cone of Cotopaxi stands out black and dreadful against the clear blue sky, and then the people of that country know what is coming. The mountain is growing so hot inside that it melts off its snowy covering; and soon it will burst forth with smoke and steam, and red-hot stones and earthquakes, which will shake the ground, and roars that will be heard, it may be, hundreds of miles away.

And now for the words cone, crater, lava. If I can make you understand those words, you will see why volcanoes must be in general of the shape of Cotopaxi.

Cone, crater, lava; those words make up the alphabet of volcano learning. The cone is the outside of a huge chimney. The crater is the mouth of it. The lava is the ore which is being melted in the furnace below, that it may flow out over the surface of the old land, and make new land instead.

And where is the furnace itself? Who can tell that? Under the roots of the mountains, under the depths of the sea; down "the path which no fowl knoweth, and which the vulture's eye hath not seen: the lion's whelp hath not trodden it, nor the fierce lion passed by it. There He putteth forth His hand upon the rock; He overturneth the mountain by the roots; He cutteth out rivers among the rocks; and His eye seeth every precious thing"—while we, like little ants, run up and down outside the earth, scratching, like ants, a few feet down, and calling that a deep ravine; or peeping a few feet down into the crater of a volcano, unable to guess what precious things may lie below; below even the fire which blazes and roars up through the thin crust of the earth. For of the inside of this earth we know nothing whatsoever. We only know that it is, on an average, several times as heavy as solid rock; but how that can be, we know not.

So let us look at the chimney, and what comes out of it; for we can see very little more.

Why is a volcano like a cone?

For the same cause for which a mole hill is like a cone, though a very rough one ; and that the little heaps which the burrowing beetles make on the moor, or which the ant-lions in France make in the sand, are all something in the shape of a cone, with a hole like a crater in the middle. What the beetle and the ant-lion do on a very little scale, the steam inside the earth does on a great scale. When once it has forced a vent into the outside air, it tears out the rocks underground, grinds them small against each other, often into the finest dust, and blasts them out of the hole which it has made. Some of them fall back into the hole, and are shot out again : but most of them fall round the hole, most of them close to it, and fewer of them further off, till they are piled up in a ring round it, just as the sand is piled up round a beetle's burrow. For days, and weeks, and months this goes on ; even it may be for hundreds of years : till a great cone is formed round the steam vent, hundreds or thousands of feet in height, of dust and stones, and of cinders likewise. For recollect, that when the steam has blown away the cold earth and rock near the surface of the ground, it begins blowing out the hot rocks down below, red-hot, white-hot, and at last actually melted. But these, as they are hurled into the cool air above, become ashes, cinders, and blocks of stone again, making the hill on which they fall bigger and bigger continually. And thus does wise Madam How stand in no need of bricklayers, but makes her chimneys build themselves.

And why is the mouth of the chimney called a crater ?

Crater, as you know, is Greek for a cup. And the mouth of these chimneys, when they have become choked and stopped working, are often just the shape of a cup, or as (the Germans call them) kessels, which means kettles, or cauldrons. I have seen some of them as beautifully and exactly rounded as if a cunning engineer had planned them, and had them dug out with a spade. At first, of course, their sides and bottom are nothing but loose stones, cinders, slag, ashes, such as would be thrown out of a furnace. But Madam How, who whenever she makes an ugly desolate place, always tries to cover over its ugliness, and set something green to grow over it, and make it pretty once more, does so often and often by her worn-

out craters. I have seen them covered with short sweet turf, like so many chalk downs. I have seen them, too, filled with bushes, which held woodcocks and wild boars. Once I came on a beautiful round crater on the top of a mountain, which was filled at the bottom with a splendid crop of potatoes. Though Madam How had not put them there herself, she had at least taught the honest Germans to put them there. And often Madam How turns her worn-out craters into beautiful lakes. There are many such crater-lakes in Italy, as you will see if ever you go there; as you may see in English galleries painted by Wilson, a famous artist who died before you were born. You recollect Lord Macaulay's ballad, "The Battle of the Lake Regillus?" Then that Lake Regillus (if I recollect right) is one of these round crater-lakes. Many such deep clear blue lakes have I seen in the Eifel, in Germany; and many a curious plant have I picked on their shores, where once the steam blasted, and the earthquake roared, and the ash-clouds rushed up high into the heaven, and buried all the land around in dust, which is now fertile soil. And long did I puzzle to find out why the water stood in some craters, while others, within a mile of them perhaps, were perfectly dry. That I never found out for myself. But learned men tell me that the ashes which fall back into the crater, if the bottom of it be wet from rain, will sometimes "set" (as it is called) into a hard cement; and so make the bottom of the great bowl waterproof, as if it were made of earthenware.

But what gives the crater this cup-shape at first?

Think——While the steam and stones are being blown out, the crater is an open funnel, with more or less upright walls inside. As the steam grows weaker, fewer and fewer stones fall outside, and more and more fall back again inside. At last they quite choke up the bottom of the great round hole. Perhaps, too, the lava or melted rock underneath cools and grows hard, and that chokes up the hole lower down. Then, down from the round edge of the crater the stones and cinders roll inward more and more. The rains wash them down, the wind blows them down. They roll to the middle, and meet each other, and stop. And so gradually the steep funnel becomes a round cup. You may prove for yourself that it

must be so, if you will try. Do you not know that if you dig a round hole in the ground, and leave it to crumble in, it is sure to become cup-shaped at last, though at first its sides may have been quite upright, like those of a bucket? If you do not know, get a trowel and make your little experiment.

And now you ought to understand what "cone" and "crater" mean. And more, if you will think for yourself, you may guess what would come out of a volcano when it broke out "in an eruption," as it is usually called. First, clouds of steam and dust (what you would call smoke); then volleys of stones, some cool, some burning hot; and at the last, because it lies lowest of all, the melted rock itself, which is called lava.

And where would that come out? At the top of the chimney? At the top of the cone?

No. Madam How, as I told you, usually makes things make themselves. She has made the chimney of the furnace make itself; and next she will make the furnace-door make itself.

The melted lava rises in the crater—the funnel inside the cone—but it never gets to the top. It is so enormously heavy that the sides of the cone cannot bear its weight, and give way low down. And then, through ashes and cinders, the melted lava burrows out twisting and twirling like an enormous fiery earthworm, till it gets to the air outside, and runs off down the mountain in a stream of fire. And so you may see (as are to be seen on Vesuvius now) two eruptions at once—one of burning stones above, and one of melted lava below.

And what is lava?

That, I think, I must tell you another time. For when I speak of it I shall have to tell you more about Madam How, and her ways of making the ground on which you stand, than I can say just now. But if you want to know (as I dare say you do) what the eruption of a volcano is like, you may read what follows. I did not see it happen; for I never had the good fortune of seeing a mountain burning, though I have seen many and many a one which has been burnt—extinct volcanoes, as they are called.

The man who saw it—a very good friend of mine, and

a very good man of science also—went last year to see an eruption of Vesuvius, not from the main crater, but from a small one which had risen up suddenly on the outside of it; and he gave me leave (when I told him that I was writing for children) to tell them what he saw.

This new cone, he said, was about 200 feet high, and perhaps 80 or 100 feet across at the top. And as he stood below it (it was not safe to go up it) smoke rolled out from its top, "rosy pink below," from the glare of the caldron, and above "faint greenish or blueish silver of indescribable beauty, from the light of the moon." But more—By good chance, the cone began to send out, not smoke only, but brilliant burning stones. "Each explosion," he says, "was like a vast girandole of rockets, with a noise (such as rockets would make) like the waves on a beach, or the wind blowing through shrouds. The mountain was trembling the whole time. So it went on for two hours and more; sometimes eight or ten explosions in a minute, and more than 1,000 stones in each, some as large as two bricks end to end. The largest ones mostly fell back into the crater; but the smaller ones, being thrown higher, and more acted on by the wind, fell in immense numbers on the leeward slope of the cone" (of course, making it bigger and bigger, as I have explained already to you), and of course, as they were intensely hot and bright, making the cone look as if it too was red-hot. But it was not so, he says, really. The color of the stones was rather "golden, and they spotted the black cone over with their golden showers, the smaller ones stopping still, the bigger ones rolling down, and jumping along just like hares." "A wonderful pedestal," he says, "for the explosion which surmounted it." How high the stones flew up he could not tell. "There was generally one which went much higher than the rest, and pierced upwards towards the moon, who looked calmly down, mocking such vain attempts to reach her." The large stones, of course, did not rise so high; and some, he says, "only just appeared over the rim of the cone, above which they came floating leisurely up, to show their brilliant forms and intense white light for an instant, and then subside again."

Try and picture that to yourselves, remembering that

this was only a little side eruption, of no more importance to the whole mountain than the fall of a slate off the roof is of importance to the whole house. And then think how mean and weak man's fireworks, and even man's heaviest artillery, are, compared with the terrible beauty and terrible strength of Madam How's artillery underneath our feet.

CHAPTER IV.

THE TRANSFORMATIONS OF A GRAIN OF SOIL.

WHY, you ask, are there such terrible things as volcanoes? Of what use can they be?

They are of use enough, my child; and of many more uses, doubt not, than we know as yet, or ever shall know. But of one of their uses I can tell you. They make, or help to make, divers and sundry curious things, from gunpowder to your body and mine.

What? I can understand their helping to make gunpowder, because the sulphur in it is often found round volcanoes; and I know the story of the brave Spaniard, who, when his fellows wanted materials for gunpowder, had himself lowered in a basket down the crater of a South American volcano, and gathered sulphur for them off the burning cliffs: but how can volcanoes help to make me? Am I made of lava? Or is there lava in me?

My child, I did not say that volcanoes helped to make *you*. I said that they helped to make your body; which is a very different matter, as I beg you to remember, now and always. Your body is no more you yourself than the hoop which you trundle, or the pony which you ride

It is, like them, your servant, your tool, your instrument, your organ, with which you work : and a very useful, trusty, cunningly-contrived organ it is ; and therefore I advise you to make good use of it, for you are responsible for it. But you yourself are not your body, or your brain, but something else, which we call your soul, your spirit, your life. And that "you yourself" would remain just the same if it were taken out of your body, and put into the body of a bee, or of a lion, or any other body ; or into no body at all. At least so I believe ; and so, I am happy to say, nine hundred and ninety-nine thousand nine hundred and ninety-nine people out of every million have always believed, because they have used their human instincts and their common sense, and have obeyed (without knowing it) the warning of a great and good philosopher called Herder, that "The organ is in no case the power which works by it ;" which is as much as to say, that the engine is not the engine-driver, nor the spade the gardener.

There have always been, and always will be, a few people who cannot see that. They think that a man's soul is part of his body, and that he himself is not one thing, but a great number of things. They think that his mind and character are only made up of all the thoughts, and feelings, and recollections which have passed through his brain ; and that as his brain changes, he himself must change, and become another person, and then another person again, continually. But do not you agree with them : but keep in mind wise Herder's warning that you are not to "confound the organ with the power," or the engine with the driver, or your body with yourself : and then we will go on and consider how a volcano, and the lava which flows from it, help to make your body.

Now I know that the Scotch have a saying, "That you cannot make broth out of whinstones" (which is their name for lava). But, though they are very clever people, they are wrong there. I never saw any broth in Scotland, as far as I know, but what whinstones had gone to the making of it ; nor a Scotch boy who had not eaten many a bit of whinstone, and been all the better for it.

Of course, if you simply put the whinstones into a

kettle and boiled them, you would not get much out of them by such rough cookery as that. But Madam How is the best and most delicate of all cooks ; and she knows how to pound, and soak, and stew whinstones so delicately, that she can make them sauce and seasoning for meat, vegetables, puddings, and almost everything that you eat ; and can put into your veins things which were spouted up red-hot by volcanoes, ages and ages since, perhaps at the bottom of ancient seas which are now firm dry land.

This is very strange—as all Madam How's doings are. And you would think it stranger still if you had ever seen the flowing of a lava stream.

Out of a cave of slag and cinders in the black hillside rushes a golden river, flowing like honey, and yet so tough that you cannot thrust a stick into it, and so heavy that great stones (if you throw them on it) float on the top, and are carried down like corks on water. It is so hot that you cannot stand near it more than a few seconds ; hotter, perhaps, than any fire you ever saw : but as it flows, the outside of it cools in the cool air, and gets covered with slag and cinders, something like those which you may see thrown out of the furnaces in the Black Country of Staffordshire. Sometimes these cling together above the lava stream, and make a tunnel, through the cracks in which you may see the fiery river rushing and roaring down below. But mostly they are kept broken and apart, and roll and slide over each other on the top of the lava, crashing and clanging as they grind together with a horrid noise. Of course that stream, like all streams, runs towards the lower grounds. It slides down glens, and fills them up ; down the beds of streams, driving off the water in hissing steam ; and sometimes (as it did in Iceland a few years ago) falls over some cliff, turning what had been a water-fall into a fire-fall, and filling up the pool below with blocks of lava suddenly cooled, with a clang and roar like that of chains shaken or brazen vessels beaten, which is heard miles and miles away. Of course, woe to the crops and gardens which stand in its way ! It crawls over them all and eats them up. It shoves down houses ; it sets woods on fire, and sends

the steam and gas out of the tree-trunks hissing into the air. And (curiously enough) it does this often without touching the trees themselves. It flows round the trunks (it did so in a wood in the Sandwich Islands a few years ago), and of course sets them on fire by its heat, till nothing is left of them but blackened posts. But the moisture which comes out of the poor tree in steam blows so hard against the lava round that it can never touch the tree, and a round hole is left in the middle of the lava where the tree was. Sometimes, too, the lava will spit out liquid fire among the branches of the trees, which hangs down afterwards from them in tassels of slag, and yet (by the very same means) the steam in the branches will prevent the liquid fire burning them off, or doing anything but just scorch the bark.

But I can tell you a more curious story still. The lava stream, you must know, is continually sending out little jets of gas and steam : some of it it may have brought up from the very inside of the earth ; most of it, I suspect, comes from the damp herbage and damp soil over which it runs. Be that as it may, a lava stream out of Mount Etna, in Sicily, came once down straight upon the town of Catania. Everybody thought that the town would be swallowed up ; and the poor people there (who knew no better) began to pray to St. Agatha—a famous saint, who, they say, was martyred there ages ago—and who, they fancy, has power in heaven to save them from the lava stream. And really what happened was enough to make ignorant people, such as they were, think that St. Agatha had saved them. The lava stream came straight down upon the town wall. Another foot, and it would have touched it, and have begun shoving it down with a force compared with which all the battering-rams that you ever read of in ancient histories would be child's toys. But lo and behold ! when the lava stream got within a few inches of the wall it stopped, and began to rear itself upright, and build itself into a wall beside the wall. It rose and rose till I believe in one place it overtopped the wall, and began to curl over in a crest. All expected that it would fall over into the town at last : but no, there it stopped, and cooled, and hardened, and left

the town unhurt. All the inhabitants said, of course, that St. Agatha had done it : but learned men found out that, as usual, Madam How had done it, by making it do itself. The lava was so full of gas, which was continually blowing out in little jets, that when it reached the wall, it actually blew itself back from the wall ; and, as the wall was luckily strong enough not to be blown down, the lava kept blowing itself back till it had time to cool. And so, my dear child, there was no miracle at all in the matter ; and the poor people of Catania had to thank not St. Agatha, and any interference of hers, but simply Him who can preserve, just as He can destroy, by those laws of nature which are the breath of His mouth and the servants of His will.

But in many a case the lava does not stop. It rolls on and on over the downs and through the valleys, till it reaches the sea shore, as it did in Hawaii in the Sandwich Islands, this very year. And then it cools, of course : but often not before it has killed the fish by its sulphurous gases and heat, perhaps for miles around. And there is good reason to believe that the fossil fish which we so often find in rocks, perfect in every bone, lying sometimes in heaps, and twisted (as I have seen them) as if they had died suddenly and violently, were killed in this very way, either by heat from lava streams, or else by the bursting up of gases poisoning the water, in earthquakes and eruptions in the bottom of the sea. I could tell you many stories of fish being killed in thousands by earthquakes and volcanoes during the last few years. But we have not time to tell about everything.

And now you will ask me, with more astonishment than ever, what possible use can there be in these destroying streams of fire ? And certainly, if you had ever seen a lava stream even when cool, and looked down, as I have done, at the great river of rough black blocks streaming away far and wide over the land, you would think it the most hideous and the most useless thing you ever saw. And yet, my dear child, there is One who told men to judge not according to the appearance, but to judge righteous judgment. He said that about matters spiritual and human : but it is quite as true about matters natural, which also are His work, and all obey His will.

Now if you had seen, as I have seen, close round the edges of these lava streams, and sometimes actually upon them, or upon the great bed of dust and ashes which have been hurled far and wide out of ancient volcanoes, happy homesteads, rich crops, hemp and flax and wheat, tobacco, lucerne, roots, and vineyards laden with white and purple grapes, you would have begun to suspect that the lava streams were not, after all, such very bad neighbors. And when I tell you that volcanic soils (as they are called), that is, soil which has at first been lava or ashes, are generally the richest soils in the world—that, for instance (as some one told me the other day), there is soil in the beautiful island of Madeira so thin that you cannot dig more than two or three inches down without coming to the solid rock of lava, or what is harder even, obsidian (which is the black glass which volcanoes sometimes make, and which the old Mexicans used to chip into swords and arrows, because they had no steel)—and that this soil, thin as it is, is yet so fertile, that in it used to be grown the grapes of which the famous Madeira wine was made—when you remember this, and when you remember, too, the Lothians of Scotland (about which I shall have to say a little to you just now), then you will perhaps agree with me, that Lady Why has not been so very wrong in setting Madam How to pour out lava and ashes upon the surface of the earth.

For see—down below under the roots of the mountains, Madam How works continually like a chemist in his laboratory, melting together all the rocks, which are the bones and leavings of the old worlds. If they stayed down below there, they would be of no use : while they will be of use up here in the open air. For, year by year, by the washing of rain and rivers—and also, I am sorry to say, by the ignorant and foolish waste of mankind—thousands and millions of tons of good stuff are running into the sea every year, which would, if it could be kept on land, make food for men and animals, plants and trees. So, in order to supply the continual waste of this upper world, Madam How is continually melting up the under world, and pouring it out of the volcanoes like manure, to renew the face of the earth. In these lava

rocks and ashes which she sends up there are certain substances without which men cannot live ; without which a stalk of corn or grass cannot grow. Without potash, without magnesia, both of which are in your veins and mine—without silicates (as they are called), which give flint to the stems of corn and of grass, and so make them stiff and hard, and able to stand upright—and very probably without the carbonic acid gas, which comes out of the volcanoes, and is taken up by the leaves of plants, and turned by Madam How's cookery into solid wood—without all these things—and I suspect without a great many more things which come out of volcanoes,—I do not see how this beautiful green world could get on at all.

Of course, when the lava first cools on the surface of the ground it is hard enough, and therefore barren enough. But Madam How sets to work upon it at once, with that delicate little water-spade of hers, which we call rain ; and with that alone, century after century, and age after age, she digs the lava stream down, atom by atom, and silts it over the country round in rich manure. So that if Madam How has been a rough and hasty workwoman in pumping her treasures up out of her mine with her great steam-pumps, she shows herself delicate and tender and kindly enough in giving them away afterwards.

Nay, even the fine dust which is sometimes blown out of volcanoes is useful to countries far away. So light it is, that it rises into the sky, and is wafted by the wind across the seas. So, in the year 1783, ashes from the Skaptar Jokull in Iceland were carried over the north of Scotland, and even into Holland, hundreds of miles to the south.

So, again, when in the year 1812 the volcano of St. Vincent, in the West India Islands poured out torrents of lava, after mighty earthquakes which shook all that part of the world, a strange thing happened (about which I have often heard from those who saw it), in the island of Barbados, several hundred miles away. For when the sun rose in the morning (it was a Sunday morning), the sky remained more dark than any night ; and all the poor negroes crowded terrified out of their houses into the streets, fancying the end of the world was come. But a

learned man who was there, finding that, though the sun was risen, it was still pitchy dark, opened his window, and found that it was stuck fast by something on the ledge outside, and, when he thrust it open, found the ledge covered deep in soft red dust; and he instantly said, like a wise man as he was, "The volcano of St. Vincent must have broken out, and these are the ashes from it." Then he ran downstairs and quieted the poor negroes, telling them not to be afraid, for the end of the world was not coming just yet. But still the dust went on falling, till the whole island, I am told, was covered an inch thick; and the same thing happened in the other islands round. People thought, and they had reason to think from what had often happened elsewhere, that though the dust might hurt the crops for that year, it would make them richer in years to come, because it would act as manure upon the soil; and so it did, after a few years: but it did terrible damage at the time, breaking off the boughs of trees, and covering up the crops: and in St. Vincent itself whole estates were ruined. It was a frightful day, but I know well that behind that How there was a Why for its happening, and happening too, about that very time, which all who know the history of negro slavery in the West Indies can guess for themselves; and confess, I hope, that in this case, as in all others, when Lady Why seems most severe she is often most just and kind.

Ah! my dear child, that I could go on talking to you of this for hours and days! But I have time now only to teach you the alphabet of these matters—and, indeed, I know little more than the alphabet myself; but if the very letters of Madam How's book, and the mere A, B, AB, of it, which I am trying to teach you, are so wonderful and so beautiful, what must its sentences be and its chapters? And what must the whole book be like? But that last none can read save He who wrote it before the worlds were made.

But now I see you want to ask a question. Let us have it out. I would sooner answer one question of yours than tell you ten things without your asking.

Is there potash and magnesia and silicates in the soil

here? And if there is, where did they come from? For there are no volcanoes in England.

Yes. There are such things in the soil; and little enough of them, as the farmers here know too well. For we here, in Windsor Forest, are on the very poorest and almost the newest soil in England; and when Madam How had used up all her good materials in making the rest of the island, she carted away her dry rubbish and shot it down here for us to make the best of; and I do not think that we and our forefathers have done so very ill with it. But where the rich part, or staple, of our soils came from first it would be very difficult to say, so often has Madam How made, and unmade, and remade England, and sifted her materials afresh every time. But if you go to the Lowlands of Scotland, you may soon see where the staple of the soil came from there, and that I was right in saying that there were atoms of lava in every Scotch boy's broth. Not that there were ever (as far as I know) volcanoes in Scotland or in England. Madam How has more than one string to her bow, or two strings either. So when she pours out her lavas, she does not always pour them out in the open air. Sometimes she pours them out at the bottom of the sea, as she did in the north of Ireland and the south-west of Scotland, when she made the Giant's Causeway, and Fingal's Cave in Staffa, too, at the bottom of the old chalk ocean, ages and ages since. Sometimes she squirts them out between the layers of rock, or into cracks which the earthquakes have made, in what are called trap dykes; of which there are plenty to be seen in Scotland, and in Wales likewise. And then she lifts the earth up from the bottom of the sea, and sets the rain to wash away all the soft rocks, till the hard lava stands out in great hills upon the surface of the ground. Then the rain begins eating away those lava hills likewise, and manuring the earth with them. And wherever those lava hills stand up, whether great or small, there is pretty sure to be rich land around them. If you look at the Geological Map of England and Ireland, and the red spots upon it, which will show you where these old lavas are, you will see how much of them there is in England, at the Lizard Point in Cornwall, and how much more in Scotland and the north of Ireland. In South Devon, in

Shropshire—with its beautiful Wrekin, and Caradoc, and Lawley,—in Wales, round Snowden (where some of the soil is very rich,) and above all in the Lowlands of Scotland, you see these red marks, showing the old lavas, which are always fertile, except the poor old granite, which is of little use save to cut into building stone, because it is too full of quartz—that is, flint.

Think of this the next time you go through Scotland in the railway, especially when you get near Edinburgh. As you run through the Lothians with their noble crops of corn, and roots, and grasses; and their great homesteads, each with its engine chimney, which makes steam do the work of men—you will see rising out of the plain hills of dark rock, sometimes in single knobs like Berwick Law or Stirling Crag, sometimes in noble ranges like Arthur's Seat, or the Sidlaws, or the Ochils. Think what these black bare lumps of whinstone are, and what they do. Remember they are mines—not gold mines, but something better still—food mines, which Madam How thrust into the inside of the earth, ages and ages since, as molten lava rock, and then cooled them and lifted them up, and pared them away with her ice-plough and her rain-spade, and spread the stuff of them over the wide carses round, to make in that bleak northern climate, which once carried nothing but fir-trees and heather, a soil fit to feed a great people; to cultivate in them industry, and science, and valiant self-dependence and self-help: and to gather round the Heart of Midlothian and the Castle Rock of Edinburgh the stoutest and the ablest little nation which Lady Why has made since she made the Greeks who fought at Salamis.

Of those Greeks you have read or ought to read, in Mr. Cox's "*Tales of the Persian War.*" Some day you will read of them in their own books, written in their grand old tongue. Remember that Lady Why made them, as she has made the Scotch, by first preparing a country for them, which would call out all their courage and their skill; and then by giving them the courage and the skill to make use of the land where she had put them.

And now think what a wonderful fairy tale you might write for yourself—and every word of it true—of the adventures of one atom of Potash or some other Salt, no

bigger than a needle's point, in such a lava stream as I have been telling of. How it has run round and round, and will run round age after age, in an endless chain of change. How it began by being molten fire underground, how then it became part of a hard cold rock, lifted up into a cliff, beaten upon by rain and storm, and washed down into the soil of the plain, till, perhaps, the little atom of mineral met with the rootlet of some great tree, and was taken up into its sap in spring, through tiny veins, and hardened the next year into a piece of solid wood. And then how that tree was cut down, and its logs, it may be, burnt upon the hearth, till the little atom of mineral lay among the wood-ashes, and was shovelled out and thrown upon the field and washed into the soil again, and taken up by the roots of a clover plant, and became an atom of vegetable matter once more. And then how, perhaps, a rabbit came by, and ate the clover, and the grain of mineral became part of the rabbit; and then how a hawk killed that rabbit and ate it, and so the grain became part of the hawk; and how the farmer shot the hawk, and it fell perchance into a stream, and was carried down into the sea; and when its body decayed, the little grain sank through the water, and was mingled with the mud at the bottom of the sea. But do its wanderings stop there? Not so, my child. Nothing upon this earth, as I told you once before, continues in one stay. That grain of mineral might stay at the bottom of the sea a thousand or ten thousand years, and yet the time would come when Madam How would set to work on it again. Slowly, perhaps, she would sink that mud so deep, and cover it up with so many fresh beds of mud, or sand, or lime, that under the heavy weight, and perhaps, too, under the heat of the inside of the earth, that Mud would slowly change to hard Slate Rock; and ages after, it may be, Madam How might melt that Slate Rock once more, and blast it out; and then through the mouth of a volcano the little grain of mineral might rise into the open air again to make fresh soil, as it had done thousands of years before. For Madam How can manufacture many different things out of the same materials. She may have so wrought with that grain of mineral, that she may have formed it into part of a precious stone, and men may dig it out of the rock, or

pick it up in the river-bed, and polish it, and set it and wear it. Think of that—that in the jewels which your mother or your sisters wear, or in your father's signet ring, there may be atoms which were part of a live plant, or a live animal, millions of years ago, and may be parts of a live plant or a live animal millions of years hence.

Think over again, and learn by heart, the links of this endless chain of change: Fire turned into Stone—Stone into Soil—Soil into Plant—Plant into Animal—Animal into Soil—Soil into Stone—Stone into Fire again—and then Fire into Stone again, and the old thing run round once more.

So it is, and so it must be. For all things which are born in Time, must change in Time, and die in Time, till that Last Day of this our little earth, in which,

“Like to the baseless fabric of a vision,
The cloud-capped towers, the gorgeous palaces,
The solemn temples, the great globe itself,
Yea, all things which inherit, shall dissolve,
And, like an unsubstantial pageant faded,
Leave not a rack behind.”

So all things change and die, and so your body too must change and die—but not yourself. Madam How made your body; and she must unmake it again, as she unmakes all her works in Time and Space; but you, child, your Soul, and Life, and Self, she did not make; and over you she has no power. For you were not, like your body, created in Time and Space; and you will endure though Time and Space should be no more: because you are the child of the Living God, who gives to each things its own body, and can give you another body, even as seems good to Him.

CHAPTER V.

THE ICE-PLOUGH.

You want to know why I am so fond of that little bit of limestone, no bigger than my hand, which lies upon the shelf; why I ponder over it so often, and show it to all sensible people who come to see me?

I do so, not only for the sake of the person who gave it to me, but because there is written on it a letter out of Madam How's alphabet, which has taken wise men many a year to decipher. I could not decipher that letter when first I saw the stone. More shame for me, for I had seen it often before, and understood it well enough, in many another page of Madam How's great book. Take the stone, and see if you can find out anything strange about it.

Well, it is only a bit of marble as big as my hand, that looks as if it had been, and really has been, broken off by a hammer. But when you look again, you see there is a smooth scraped part on one edge, that seems to have been rubbed against a stone.

Now look at that rubbed part, and tell me how it was done.

You have seen men often polish one stone on another, or scour floors with a Bath brick, and you will guess at first that this was polished so : but if it had been, then the rubbed place would have been flat : but if you put your fingers over it, you will find that it is not flat. It is rolled, fluted, channelled, so that the thing or things which rubbed it must have been somewhat round. And it is covered, too, with very fine and smooth scratches or grooves, all running over the whole in the same line. Now, what could have done that ?

Of course a man could have done it, if he had taken a large round stone in his hand, and worked the large channellings with that, and then had taken fine sand and gravel upon the points of his fingers, and worked the small scratches with that. But this stone came from a place where man had, perhaps, never stood before,—ay, which, perhaps, had never seen the light of day before since the world was made ; and as I happen to know that no man made the marks upon that stone, we must set to work and think again for some tool of Madam How's which may have made them.

And now I think you must give up guessing, and I must tell you the answer to the riddle. Those marks were made by a hand which is strong and yet gentle, tough and yet yielding, like the hand of a man ; a hand which handles and uses in a grip stronger than a giant's

its own carving tools, from the great boulder stone as large as this whole room to the finest grain of sand. And that is Ice.

That piece of stone came from the side of the Rosenlaui glacier in Switzerland, and it was polished by the glacier ice. The glacier melted and shrank this last hot summer further back than it had done for many years, and left bare sheets of rock, which it had been scraping at for ages, with all the marks fresh upon them. And that bit was broken off and brought to me, who never saw a glacier myself, to show me how the marks which the ice makes in Switzerland are exactly the same as those which the ice has made in Snowdon and in the Highlands, and many another place where I have traced them, and written a little, too, about them, in years gone by. And so I treasure this, as a sign that Madam How's ways do not change, nor her laws become broken; that as that great philosopher Sir Charles Lyell will tell you, when you read his books, Madam How is making and unmaking the surface of the earth now, by exactly the same means as she was making and unmaking it ages and ages since; and that what is going on now slowly and surely in the Alps in Switzerland was going on once here where we stand.

It is very difficult, I know, for a little boy like you to understand how ice, and much more how soft snow, should have such strength that it can grind this little stone, much more such strength as to grind whole mountains into plains. You have never seen ice and snow do harm. You cannot even recollect the Crimean Winter, as it was called then; and well for you you cannot, considering all the misery it brought at home and abroad. You cannot, I say, recollect the Crimean Winter, when the Thames was frozen over above the bridges, and the ice piled in little bergs ten to fifteen feet high, which lay, some of them, stranded on the shores, about London itself, and did not melt, if I recollect, until the end of May. You never stood, as I stood, in the great winter of 1837-8, on Battersea Bridge, to see the ice break up with the tide, and saw the great slabs and blocks leaping and piling upon each other's backs, and felt the bridge tremble with their shocks, and listened to their horrible

grind and roar, till one got some little picture in one's mind of what must be the breaking up of an ice-floe in the Arctic regions, and what must be the danger of a ship nipped in the ice and lifted up on high, like those in the pictures of Arctic voyages which you are so fond of looking through. You cannot recollect how that winter, even in our little Blackwater Brook, the alder stems were all peeled white, and scarred, as if they had been gnawed by hares and deer, simply by the rushing and scraping of the ice,—a sight which gave me again a little picture of the destruction which the ice makes of quays, and stages, and houses along the shore upon the coasts of North America, when suddenly, setting in with wind and tide, it jams and piles up high inland, as you may read for yourself some day in a delightful book called "Frost and Fire." You recollect none of these things. Ice and snow are to you mere playthings; and you long for winter, that you may make snowballs and play hockey and skate upon the ponds, and eat ice like a foolish boy till you make your stomach ache. And I daresay you have said, like many another boy, on a bright cheery ringing frosty day, "Oh that it would be always winter!" You little knew for what you asked. You little thought what the earth would soon be like, if it were always winter,—if one sheet of ice on the pond glued itself on to the bottom of the last sheet, till the whole pond was a solid mass,—if one snow-fall lay upon the top of another snow-fall till the moor was covered many feet deep and the snow began sliding slowly down the glen from Coombs's, burying the green fields, tearing the trees up by their roots, burying gradually house, church, and village, and making this place for a few thousand years what it was many thousand years ago. Good-bye then, after a very few winters, to bees, and butterflies, and singing birds, and flowers; and good-bye to all vegetables and fruit and bread; good-bye to cotton and woollen clothes. You would have, if you were left alive, to dress in skins, and to eat fish and seals, if any came near enough to be caught. You would have to live, in a word, if you could live at all, as Esquimaux live now in Arctic regions, and as people had to live in England ages since, in the times when it was always winter, and icebergs

floated between here and Finchampstead. Oh no, my child; thank Heaven that it is not always winter; and remember that winter ice and snow, though it is a very good tool with which to make the land, must leave the land year by year, if that land is to be fit to live in.

I said that if the snow piled high enough upon the moor, it would come down the glen in a few years through Coombs's Wood; and I said then you would have a small glacier here—such a glacier (to compare small things with great) as now comes down so many valleys in the Alps, or as come down all the valleys of Greenland and Spitzbergen till they reach the sea, and there end as cliffs of ice, from which great icebergs snap off continually, and fall and float away, wandering southward into the Atlantic for many a hundred miles. You have seen drawings of such glaciers in Captain Cook's Voyages; and you may see photographs of Swiss glaciers in any good London print-shop; and therefore you have seen almost as much about them as I have seen, and may judge for yourself how you would like to live where it is always winter.

Now you must not ask me to tell you what a glacier is like, for I have never seen one; at least, those which I have seen were more than fifty miles away, looking like white clouds hanging on the gray mountain sides. And it would be an impertinence—that means a meddling with things with which I have no business—to picture to you glaciers which have been pictured so well and often by gentlemen who escape every year from their hard work in town to find among the glaciers of the Alps health, and refreshment, and sound knowledge, and that most wholesome and strengthening of all medicines, toil.

So you must read of them in such books as "Peaks, Passes, and Glaciers," and Mr. Willes's "Wanderings in the High Alps," and Professor Tyndall's different works; or you must look at them (as I just now said) in photographs or in pictures. But when you do that, or when you see a glacier for yourself, you must bear in mind what a glacier means—that it is a river of ice, fed by a lake of snow. The lake from which it springs is the eternal snow-field which stretches for miles and miles along the mountain tops, fed continually by fresh snow-storms falling from the sky. That snow slides off into

the valleys hour by hour, and as it rushes down is ground and pounded and thawed and frozen again into a sticky paste of ice, which flows slowly but surely till it reaches the warm valley at the mountain foot, and there melts bit by bit. The long black lines which you see winding along the white and green ice of the glacier are the stones which have fallen from the cliffs above. They will be dropped at the end of the glacier, and mixed with silt and sand and other stones which have come down inside the glacier itself, and piled up in the field in great mounds, which are called moraines, such as you may see and walk on in Scotland many a time, though you might never guess what they are.

The river which runs out at the glacier foot is, you must remember, all foul and milky with the finest mud ; and that mud is the grinding of the rocks over which the glacier has been crawling down, and scraping them as it scraped my bit of stone with pebbles and with sand. And this is the alphabet, which, if you learn by heart, you will learn to understand how Madam How uses her great ice-plough to plough down her old mountains, and spread the stuff of them about the valleys to make rich straths of fertile soil. Nay, so immensely strong, because immensely heavy, is the share of this her great ice-plough, that some will tell you (and it is not for me to say that they are wrong) that with it she has ploughed out all the mountain lakes in Europe and in North America ; that such lakes, for instance, as Ullswater or Windermere have been scooped clean out of the solid rock by ice which came down these glaciers in old times. And be sure of this, that next to Madam How's steam-pump and her rain-spade her great ice-plough has had, and has still, the most to do with making the ground on which we live.

Do I mean that there were ever glaciers here? No, I do not. There have been glaciers in Scotland in plenty. And if any Scotch boy shall read this book, it will tell him presently how to find the marks of them far and wide over his native land. But as you, my child, care most about this country in which you live, I will show you in any gravel pit, or hollow lane upon the moor, the marks, not of a glacier, which is an ice-river, but of a whole sea of ice.

Let us come up to the pit upon the top of the hill, and look carefully at what we see there. The lower part of the pit of course is a solid rock of sand. On the top of that is a cap of gravel, five, six, ten feet thick. Now the sand was laid down there by water at the bottom of an old sea ; and therefore the top of it would naturally be flat and smooth, as the sands at Hunstanton or at Bourne-mouth are ; and the gravel, if it was laid down by water, would naturally lie flat on it again : but it does not. See how the top of the sand is dug out into deep waves and pits, filled up with gravel. And see, too, how over some of the gravel you get sand again, and then gravel again, and then sand again, till you cannot tell where one fairly begins and the other ends. Why, here are little dots of gravel, six or eight feet down, in what looks the solid sand rock, yet the sand must have been opened somehow to put the gravel in.

You say you have seen that before. You have seen the same curious twisting of the gravel and sand into each other on the top of Farley Hill, and in the new cutting on Minley Hill ; and, best of all, in the railway cutting between Ascot and Sunningdale, where upon the top of the white sand the gravel is arranged in red and brown waves, and festoons, and curlicues, almost like Prince of Wales's feathers. Yes, that last is a beautiful section of ice-work ; so beautiful, that I hope to have it photographed some day.

Now, how did ice do this ?

Well, I was many a year before I found out that, and I daresay I never should have found it out for myself. A gentleman named Trimmer, who, alas ! is now dead, was, I believe, the first to find it out. He knew that along the coast of Labrador, and other cold parts of North America, and on the shores, too, of the great river St. Lawrence, the stranded icebergs and the icefoot, as it is called, which is continually forming along the freezing shores, grub and plough every tide into the mud and sand, and shove up before them, like a ploughshare, heaps of dirt ; and that, too, the ice itself is full of dirt, of sand and stones, which it may have brought from hundreds of miles away ; and that, as this ploughshare of dirty ice grubs onward, the nose of the plough is con-

tinually being broken off, and left underneath the mud ; and that, when summer comes, and the ice melts, the mud falls back into the place where the ice had been, and covers up the gravel which was in the ice. So, what between the grubbing of the ice-plough into the mud, and the dirt which it leaves behind when it melts, the stones, and sand, and mud upon the shore are jumbled up into curious curved and twisted layers, exactly like those which Mr. Trimmer saw in certain gravel-pits. And when I first read about that, I said, "And exactly like what I have been seeing in every gravel-pit round here, and trying to guess how they could have been made by waves or currents of water, and yet never could make any guess which would do." But after that, it was all explained to me ; and I said, "Honor to the man who has let Madam How teach him what she had been trying to teach me for fifteen years, while I was too stupid to learn it. Now I am certain, as certain as I can be of any earthly thing, that the whole of these Windsor Forest Flats were ages ago ploughed and harrowed over and over again, by ice-floes and icebergs drifting and standing in a shallow sea."

And if you say, my dear child, as some people will say, that it is like building a large house upon a single brick to be sure that there was an iceberg sea here, just because I see a few curlicues in the gravel and sand—then I must tell you that there are sometimes—not often, but sometimes—pages in Madam How's book in which one single letter tells you as much as a whole chapter ; in which if you find one little fact, and know what it really means, it makes you certain that a thousand other great facts have happened. You may be astonished : but you cannot deny your own eyes, and your own common sense. You feel like Robinson Crusoe, when, walking along the shore of his desert island, he saw for the first time the print of a man's foot in the sand. How it could have got there without a miracle he could not dream. But there it was. One footprint was as good as the footprints of a whole army would have been. A man had been there ; and more men might come. And in fear of the savages—and if you have read Robinson Crusoe you know how just his fears were—he went home trembling, and loaded his

muskets, and barricaded his cave, and passed sleepless nights watching for the savages who might come, and who came after all.

And so there are certain footprints in geology which there is no mistaking ; and the prints of the ice-plough are among them.

For instance :—When they were trenching the new plantation close to Wellington College station, the men turned up out of the ground a great many Sarsden stones ; that is, pieces of hard sugary sand, such as Stonehenge is made of. And when I saw these I said, “I suspect these were brought here by icebergs :” but I was not sure, and waited. As the men dug on, they dug up a great many large flints, with bottle-green coats. “Now,” I said, “I am sure. For I know where these flints must have come from.” And for reasons which would be too long to tell you here, I said, “Some time or other, icebergs have been floating northward from the Hog’s Back over Aldershot and Farnborough, and have been trying to get into the Vale of Thames by the slope at Wellington College station ; and they have stranded, and dropped these flints.” And I am so sure of that, that if I found myself out wrong after all, I should be at my wits’ end ; for I should know that I was wrong about a hundred things besides.

Or again, if you ever go up Deeside in Scotland, towards Balmoral, and turn up Glen Muick, towards Alt-na-guisach, of which you may see a picture in the Queen’s last book, you will observe standing on your right hand, just above Birk Hall, three pretty rounded knolls, which they call the Coile Hills. You may easily know them by their being covered with beautiful green grass instead of heather. That is because they are made of serpentine or volcanic rock, which (as you have seen) often cuts into beautiful red and green marble ; and which also carries a very rich soil, because it is full of magnesia. If you go up those hills, you get a glorious view—the mountains sweeping round you where you stand, up to the top of Lochnagar, with its bleak walls a thousand feet perpendicular, and gullies into which the sun never shines, and round to the dark fir forests of the Ballochbuie. That is the arc of the bow ; and the cord of the bow is

the silver Dee, more than a thousand feet below you; and in the centre of the cord, where the arrow would be fitted in, stands Balmoral, with its Castle, and its Gardens, and its Park, and pleasant cottages and homesteads all around. And when you have looked at the beautiful amphitheatre of forest at your feet, and looked too at the great mountains to the westward, and Benaun, and Bennabuird and Benna-muicdhui, with their bright patches of eternal snow, I should advise you to look at the rock on which you stand, and see what you see there. And you will see that on the side of the Coiles towards Lochnagar, and between the knolls of them, are scattered streams, as it were, of great round boulder stones—which are not serpentine, but granite from the top of Lochnagar, five miles away. And you will see that the knolls of serpentine rock, or at least their backs and shoulders towards Lochnagar, are all smoothed and polished till they are as round as the backs of sheep, “*rochers moutonnés*,” as the French call ice-polished rocks; and then, if you understand what that means, you will say, as I said, “I am perfectly certain that this great basin between me and Lochnagar, which is now 3,000 feet deep of empty air, was once filled up with ice to the height of the hills on which I stand—about 1700 feet high—and that that ice ran over into Glen Muick, between these pretty knolls, and covered the ground where Birk Hall now stands.”

And more :—When you see growing on those knolls of serpentine a few pretty little Alpine plants, which have no business down there so low, you will have a fair right to say, as I said, “The seeds of these plants were brought by the ice ages and ages since from off the mountain range of Lochnagar, and left here, nestling among the rocks, to found a fresh colony, far from their old mountain home.”

If I could take you with me up to Scotland,—take you, for instance, along the Tay, up the Pass of Dunkeld, or up Strathmore towards Aberdeen, or up the Dee towards Braemar,—I could show you signs, which cannot be mistaken, of the time when Scotland was, just like Spitzbergen or like Greenland now, covered in one vast sheet of snow and ice from year's end to year's end; when

glaciers were ploughing out its valleys, icebergs were breaking off the icy cliffs and floating out to sea ; when not a bird, perhaps, was to be seen save sea-fowl, not a plant upon the rocks but a few lichens, and Alpine saxifages, and such like—desolation and cold and lifelessness everywhere. That ice-time went on for ages and for ages ; and yet it did not go on in vain. Through it Madam How was ploughing down the mountains of Scotland to make all those rich farms which stretch from the north side of the Frith of Forth into Sutherlandshire. I could show you everywhere the green banks and knolls of earth, which Scotch people call “kames” and “tomans”—perhaps brought down by ancient glaciers, or dropped by ancient icebergs—now so smooth and green through summer and through winter, among the wild heath and the rough peat-moss, that the old Scots fancied, and I dare say Scotch children fancy still, fairies dwelt inside. If you laid your ear against the mounds, you might hear the fairy music, sweet and faint, beneath the ground. If you watched the mound at night, you might see the fairies dancing the turf short and smooth, or riding out on fairy horses, with green silk clothes and jingling bells. But if you fell asleep upon the mounds, the fairy queen came out and carried you for seven years into Fairyland, till you awoke again in the same place, to find all changed around you, and yourself grown thin and old.

These are all dreams and fancies—untrue, not because they are too strange and wonderful, but because they are not strange and wonderful enough : for more wonderful sure than any fairy tale it is, that Madam How should make a rich and pleasant land by the brute force of ice.

And were there any men and women in that old age of ice ? That is a long story, and a dark too ; we will talk of it next time.

CHAPTER VI.

THE TRUE FAIRY TALE.

You asked if there were men in England when the country was covered with ice and snow. Look at this, and judge for yourself.

What is it? a piece of old mortar? Yes. But mortar which was made by Madam How herself, and not by any man. And what is in it? A piece of flint and some bits of bone. But look at that piece of flint. It is narrow, thin, sharp-edged: quite different in shape from any bit of flint which you or I ever saw among the hundreds of thousands of broken bits of gravel which we tread on here all day long; and here are some more bits like it, which came from the same place—all very much the same shape, like rough knives or razor blades; and here is a core of flint, the remaining part of a large flint, from which, as you may see, blades like those have been split off. Those flakes of flint, my child, were split off by men; even your young eyes ought to be able to see that. And here are other pieces of flint—pear-shaped, but flattened, sharp at one end and left rounded at the other, which look like spear-heads, or arrow-heads, or pointed axes, or pointed hatchets—even your young eyes can see that these must have been made by man. And they are, I may tell you, just like the tools of flint, or of obsidian, which is volcanic glass, and which savages use still where they have not iron. There is a great obsidian knife, you know, in a house in this very parish, which came from Mexico; and your eye can tell you how like it is to these flint ones. But these flint tools are very old. If you crack a fresh flint, you will see that its surface is gray, and somewhat rough, so that it sticks to your tongue. These tools are smooth and shiny: and the edges of some of them are a little rubbed from being washed about in gravel; while the iron in the gravel has stained them reddish, which it would take hundreds and perhaps thousands of years to

do. There are little rough markings, too, upon some of them, which, if you look at through a magnifying glass, are iron, crystallized into the shape of little seaweeds and trees—another sign that they are very very old. And what is more, near the place where these flint flakes come from there are no flints in the ground for hundreds of miles; so that men must have brought them there ages and ages since. And to tell you plainly, these are scrapers, such as the Esquimaux in North America still use to scrape flesh off bones, and to clean the insides of skins.

But how did these people (savages perhaps) live when the country was icy cold? Look at the bits of bone. They have been split, you see, lengthways; that I suppose, was to suck the marrow out of them, as savages do still. But to what animal do the bones belong? That is the question; and one which I could not have answered you, if wiser men than I am could not have told me.

They are the bones of reindeer—such reindeer as are now found only in Lapland and the half-frozen parts of North America, close to the Arctic circle, where they have six months day and six months night. You have read of Laplanders, and how they drive reindeer in their sledges, and live upon reindeer milk; and you have read of Esquimaux, who hunt seals and walrus, and live in houses of ice, lighted by lamps fed with the same blubber on which they feed themselves. I need not tell you about them.

Now comes the question—Whence did these flints and bones come? They came out of a cave in Dordogne, in the heart of sunny France,—far away to the south, where it is hotter every summer than it was here even this summer, from among woods of box and evergreen oak, and vineyards of rich red wine. In that warm land once lived savages, who hunted amid ice and snow the reindeer, and with the reindeer animals stranger still.

And now I will tell you a fairy tale: to make you understand it at all I must put it in the shape of a tale. I call it a fairy tale, because it is so strange; indeed I think I ought to call it the fairy tale of all fairy tales, for by the time we get to the end of it I think it will explain to you how our forefathers got to believe in fairies, and trolls, and

elves, and scratlings, and all strange little people who were said to haunt the mountains and the caves.

Well, once upon a time, so long ago that no man can tell when, the land was so much higher, that between England and Ireland, and, what is more, between England and Norway, was firm dry land. The country then must have looked—at least we know it looked so in Norfolk—very like what our moors look like here. There were forests of Scotch fir, and of spruce too, which is not wild in England now, though you may see plenty in every plantation. There were oaks and alders, yews and sloes, just as there are in our woods now. There was buck-bean in the bogs, as there is in Larmer's and Heath pond; and white and yellow water-lilies, horn-wort, and pond-weeds, just as there are now in our ponds. There were wild horses, wild deer, and wild oxen, those last of an enormous size. There were little yellow roe-deer, which will not surprise you, for there are hundreds and thousands in Scotland to this day; and, as you know, they will thrive well enough in our woods now. There were beavers too: but that must not surprise you, for there were beavers in South Wales long after the Norman Conquest, and there are beavers still in the mountain glens of the south-east of France. There were honest little water-rats too, who I daresay sat up on their hind legs like monkeys, nibbling the water-lily pods, thousands of years ago, as they do in our pond now. Well, so far we have come to nothing strange: but now begins the fairy tale. Mixed with all these animals, there wandered about great herds of elephants and rhinoceroses; not smooth-skinned, mind, but covered with hair and wool, like those which are still found sticking out of the everlasting ice-cliffs, at the mouth of the Lena and other Siberian rivers, with the flesh, and skin, and hair so fresh upon them, that the wild wolves tear it off, and snarl and growl over the carcase of monsters who were frozen up thousands of years ago. And with them, stranger still, were great hippopotamuses; who came, perhaps, northward in summer time along the sea-shore and down the rivers, having spread hither all the way from Africa; for in those days, you must understand, Sicily, and Italy, and Malta—look at your map—were joined to the coast of Africa: and so it may be was

the rock of Gibraltar itself ; and over the sea where the Straits of Gibraltar now flow was firm dry land, over which hyænas and leopards, elephants and rhinoceroses ranged into Spain ; for their bones are found at this day in the Gibraltar caves. And this is the first chapter of my fairy tale.

Now while all this was going on, and perhaps before this began, the climate was getting colder year by year—we do not know how ; and what is more, the land was sinking ; and it sank so deep that at last nothing was left out of the water but the tops of the mountains in Ireland, and Scotland, and Wales. It sank so deep that it left beds of shells belonging to the Arctic regions nearly two thousand feet high upon the mountain side. And so

“ It grew wondrous cold,
And ice mast-high came floating by,
As green as emerald.”

But there were no masts then to measure the icebergs by, nor any ship nor human being there. All we know is that the icebergs brought with them vast quantities of mud, which sank to the bottom, and covered up that pleasant old forest-land in what is called boulder clay ; clay full of bits of broken rock, and of blocks of stone so enormous, that nothing but an iceberg could have carried them. So all the animals were drowned or driven away, and nothing was left alive perhaps, except a few little hardy plants which clung about cracks and gullies in the mountain tops ; and whose descendants live there still. That was a dreadful time ; the worst, perhaps, of all the æge of Ice : and so ends the second chapter of my fairy tale.

Now for my third chapter. “ When things come to the worst,” says the proverb, “ they commonly mend ; ” and so did this poor frozen and drowned land of England and France and Germany, though it mended very slowly. The land began to rise out of the sea once more, and rose till it was perhaps as high as it had been at first, and hundreds of feet higher than it is now : but still it was very cold, covered, in Scotland at least, with one great sea of ice and glaciers descending down into the sea, as I said when I spoke to you about the Ice-Plough. But as the

land rose, and grew warmer, too, while it rose, the wild beasts who had been driven out by the great drowning came gradually back again. As the bottom of the old icy sea turned into dry land, and got covered with grasses, and weeds, and shrubs once more, elephants, rhinoceroses, hippopotamuses, oxen—sometimes the same species, sometimes slightly different ones—returned to France, and then to England (for there was no British Channel then to stop them); and with them came other strange animals, especially the great Irish elk, as he is called, as large as the largest horse, with horns some times ten feet across. A pair of those horns with the skull you have seen yourself, and can judge what a noble animal he must have been. Enormous bears came too, and hyænas, and a tiger or lion (I cannot say which), as large as the largest Bengal tiger now to be seen in India.

And in those days—we cannot, of course, exactly say when—there came—first, I suppose, into the south and east of France, and then gradually onward into England and Scotland—creatures without any hair to keep them warm or scales to defend them, without horns or tusks to fight with, or teeth to worry and bite; the weakest you would have thought of the beasts, and yet stronger than all the animals, because they were Men, with reasonable souls. Whence they came we cannot tell, nor why; perhaps from mere hunting after food, and love of wandering and being independent and alone. Perhaps they came into that icy land for fear of stronger and cleverer people than themselves; for we have no proof, my child, none at all, that they were the first men that trod this earth. But be that as it may, they came; and so cunning were these savage men, and so brave likewise, though they had no iron among them, only flint and sharpened bones, yet they contrived to kill and eat the mammoths, and the giant oxen, and the wild horses, and the reindeer, and to hold their own against the hyænas, and tigers, and bears, simply because they had wits, and the dumb animals had none. And that is the strangest part to me of all my fairy tale. For what a man's wits are, and why he has them, and therefore is able to invent and to improve, while even the cleverest ape has none, and therefore can invent and improve nothing, and there-

fore cannot better himself, but must remain from father to son, and father to son again, a stupid, pitiful, ridiculous ape, while men can go on civilizing themselves, and growing richer and more comfortable, wiser and happier, year by year—how that comes to pass, I say, is to me a wonder and a prodigy and a miracle, stranger than all the most fantastic marvels you ever read in fairy tales.

You may find the flint weapons which these old savages used buried in many a gravel-pit up and down France and the south of England: but you will find none here; for the gravel here was made (I am told) at the beginning of the ice-time, before the north of England sunk into the sea, and therefore long, long before men came into this land. But most of their remains are found in caves which water has eaten out of the limestone rocks, like that famous cave of Kent's Hole at Torquay. In it, and in many another cave, lie the bones of animals which the savages ate, and cracked to get the marrow out of them, mixed up with their flint-weapons and bone harpoons, and sometimes with burnt ashes and with round stones, used perhaps to heat water, as savages do now, all baked together into a hard paste or breccia by the lime. These are in the water, and are often covered with a floor of stalagmite which has dripped from the roof above and hardened into stone. Of these caves and their beautiful wonders I must tell you another day. We must keep now to our fairy tale. But in these caves, no doubt, the savages lived; for not only have weapons been found in them, but actually drawings scratched (I suppose with flint) on a bone or mammoth ivory; drawings of elk, and bull, and horse, and ibex; and one, which was found in France, of the great mammoth himself, the woolly elephant, with a mane on his shoulders like a lion's mane. So you see that one of the earliest fancies of this strange creature called man was to draw, as you and your school-fellows love to draw, and copy what you see, you know not why. Remember that. You like to draw: but why you like it neither you nor any man can tell. It is one of the mysteries of human nature; and that poor savage clothed in skins, dirty it may be, and more ignorant than you (happily) can conceive, when he sat in the cave scratching on ivory the figures of the animals he hunted,

was proving thereby that he had the same wonderful and mysterious human nature as you ; that he was the kinsman of every painter and sculptor who ever felt it a delight and duty to copy the beautiful works of God.

Sometimes, again, especially in Denmark, these savages have left behind upon the shore mounds of dirt, which are called there "kjokked-moddings," "kitchen-middens" as they would say in Scotland, kitchen-dirtheaps" as we should say here down South ; and a very good name for them that is. For they are made up of the shells of oysters, cockles, mussels, and periwinkles, and other shore-shells beside, on which those poor creature fed ; and mingled with them are broken bones of beasts, and fishes, and birds, and flint knives, and axes, and sling-stones ; and here and there hearths, on which they have cooked their meals in some rough way ; and that is nearly all we know about them : but this we know from the size of certain of the shells, and from other reasons which you would not understand, that these mounds were made an enormous time ago, when the water of the Baltic Sea was far more salt than it is now.

But what has all this to do with my fairy tale? This :—

Suppose that these people, after all, had been fairies?

I am in earnest. Of course, I do not mean that these folk could make themselves invisible, or that they had any supernatural powers—any more, at least, than you and I have—or that they were anything but savages : but this I do think, that out of old stories of these savages grew up the stories of fairies, elves, and trolls, and scratlings, and cluricaunes, and ogres, of which you have read so many.

When stronger and bolder people, like the Irish, and the Highlanders of Scotland, and the Gauls of France, came northward with their bronze and iron weapons : and still more when our own forefathers, the Germans and the Norsemen, came, these poor little savages, with their flint arrows and axes, were no match for them, and had to run away northward, or be all killed out ; for people were fierce and cruel in those old times, and looked on every one of a different race from themselves as a natural enemy. They had not learnt—alas ! too many have not

learnt it yet—that all men are brothers for the sake of Jesus Christ our Lord. So these poor savages were driven out, till none were left, save the little Lapps up in the north of Norway, where they live to this day.

But stories of them, and of how they dwelt in caves, and had strange customs, and used poisoned weapons, and how the elf bolts (as their flint arrow-heads are still called) belonged to them, lingered on, and were told round the fire on winter nights, and added to, and played with half in fun, till a hundred legends sprang up about them, which used once to be believed by grown-up folk, but which now only amuse children. And because some of these savages were very short, as the Lapps and Esquimaux are now, the story grew of their being so small that they could make themselves invisible; and because others of them were (but probably only a few) very tall and terrible, the story grew that there were giants in that old world, like that famous Gogmagog, whom Brutus and his Britons met (so old fables tell), when they landed first at Plymouth, and fought him, and threw him over the cliff. Ogres, too—of whom you read in fairy tales—I am afraid that there were such people once, even here in Europe; strong and terrible savages, who ate human beings. Of course, the legends and tales about them became ridiculous and exaggerated as they passed from mouth to mouth over the Christmas fire, in the days when no one could read or write. But that the tales began by being true any one may well believe who knows how many cannibal savages there are in the world even now. I think that, if ever there was an ogre in the world, he must have been very like a certain person who lived, or was buried, in a cave in the Neanderthal, between Elberfeld and Dusseldorf, on the Lower Rhine. The skull and bones which were found there (and which are very famous now among scientific men) belonged to a personage whom I should have been very sorry to meet, and still more to let you meet, in the wild forest; to a savage of enormous strength of limb (and I suppose of jaw), likewise

“like an ape,
With forehead villanous low;”

who could have eaten you if he would ; and (I fear) also would have eaten you if he could. Such savages may have lingered (I believe, from the old ballads and romances, that they did linger) for a long time in lonely forests and mountain caves, till they were all killed out by warriors who wore mail-armor, and carried steel sword, and battle-axe, and lance.

But had these people any religion ?

My dear child, we cannot know, and need not know. But we know this—that God beholds all the heathen. He fashions the hearts of them, and understandeth all their works. And we know also that He is just and good. These poor folks were, I doubt not, happy enough in their way ; and we are bound to believe (for we have no proof against it), that most of them were honest and harmless enough likewise. Of course, ogres and cannibals, and cruel and brutal persons (if there were any among them), deserved punishment : and punishment, I do not doubt, they got. But, of course, again, none of them knew things which you know : but for that very reason they were not bound to do many things which you are bound to do. For those to whom little is given, of them shall little be required. What their religion was like, or whether they had any religion at all, we cannot tell. but this we can tell, that known unto God are all His works from the creation of the world ; and that His mercy is over all His works, and He hateth nothing that He has made. These men and women, whatever they were, were God's work. And therefore we may comfort ourselves with the certainty that, whether or not they knew God, God knew them.

And so ends my fairy tale.

But is it not a wonderful tale ? More wonderful, if you will think over it, than any story invented by man. But so it always is. "Truth," wise men tell us, "is stranger than fiction." Even a child like you will see that it must be so, if you will but recollect who makes fiction, and who makes facts.

Man makes fiction : he invents stories, pretty enough, fantastical enough. But out of what does he make them up ? Out of a few things in this great world which he has seen, and heard, and felt, just as he makes up his

dreams. But who makes truth? Who makes facts? Who, but God?

Then truth is as much larger than fiction, as God is greater than man; as much larger as the whole universe is larger than the little corner of it that any man, even the greatest poet or philosopher, can see; and as much grander, and as much more beautiful, and as much more strange. For one is the whole, and the other is only a few tiny scraps of the whole. The one is the work of God; the other is the work of man. Be sure that no man can ever fancy anything strange, unexpected, and curious, without finding, if he had eyes to see, a hundred things around his feet more strange, more unexpected, more curious, actually ready-made already by God. You are fond of fairy tales, because they are fanciful, and like your dreams. My dear child, as your eyes open to the true fairy tale which Madam How can tell you all day long, nursery stories will seem to you poor and dull. All those feelings in you which your nursery tales call out,—imagination, wonder, awe, pity, and I trust, too, hope and love—will be called out, I believe, by the Tale of all Tales, the true "*Märchen allen Märchen*," so much more fully and strongly and purely, that you will feel that novels and story-books are scarcely worth your reading, as long as you can read the great green book, of which every bud is a letter, and every tree a page.

Wonder if you will. You cannot wonder too much. That you might wonder all your life long, God put you into this wondrous world, and gave you that faculty of wonder which he has not given to the brutes; which is at once the mother of sound science, and a pledge of immortality in a world more wondrous even than this. But wonder at the right thing, not at the wrong; at the real miracles and prodigies, not at the sham. Wonder not at the world of man. Waste not your admiration, interest, hope on it, its pretty toys, gay fashions, fine clothes, tawdry luxuries, silly amusements. Wonder at the works of God. You will not, perhaps, take my advice yet. The world of man looks so pretty, that you will needs have your peep at it, and stare into its shop windows; and if you can, go to a few of its stage plays, and dance at a few of its balls. Ah—well—After a wild

dream comes an uneasy waking ; and after too many sweet things, comes a sick headache. And one morning you will awake, I trust and pray, from the world of man to the world of God, and wonder where wonder is due, and worship where worship is due. You will awake like a child who has been at a pantomime over night, staring at the "fairy halls," which are all paint and canvas ; and the "dazzling splendors," which are gas and oils ; and the "magic transformations," which are done with ropes and pulleys ; and the "brilliant elves," who are poor little children out of the next foul alley ; and the harlequin and clown, who through all their fun are thinking wearily over the old debts which they must pay, and the hungry mouths at home which they must feed ; and so, having thought it all wondrously glorious, and quite a fairy land, slips tired and stupid into bed, and wakes next morning to see the pure light shining in through the delicate frost-lace on the window-pane, and looks out over fields of virgin snow, and watches the rosy dawn and cloudless blue, and the great sun rising to the music of cawing rooks and piping stares, and says, "This is the true wonder. This is the true glory. The theatre last night was the fairy land of man ; but this is the fairy land of God."

CHAPTER VII.

THE CHALK-CARTS.

WHAT do you want to know about next? More about the caves in which the old savages lived,—how they were made, and how the curious inside them got there, and so forth?

Well, we will talk about that in good time : but now—What is that coming down the hill?

Oh, only some chalk-carts.

Only some chalk-carts? It seems to me that these chalk-carts are the very things we want ; that if we follow them far enough—I do not mean with our feet along the public road, but with our thoughts along a road which, I am sorry to say, the public do not yet know much about

—we shall come to a cave, and understand how a cave is made. Meanwhile, do not be in a hurry to say, “Only a chalk-cart,” or only a mouse, or only a dead leaf. Chalk-carts, like mice, and dead leaves, and most other matters in the universe, are very curious and odd things in the eyes of wise and reasonable people. Whenever I hear young men saying “only” this and “only” that, I begin to suspect them of belonging, not to the noble army of sages—much less to the most noble army of martyrs,—but to the ignoble army of noodles, who think nothing interesting or important but dinners, and balls, and races, and backbiting their neighbors: and I should be sorry to see you enlisting in that regiment when you grow up. But think—are not chalk-carts very odd and curious things? I think they are. To my mind, it is a curious question how men ever thought of inventing wheels; and, again, when they first thought of it. It is a curious question, too, how men ever found out that they could make horses work for them, and so began to tame them, instead of eating them; and a curious question (which I think we shall never get answered) when the first horse-tamer lived, and in what country. And a very curious, and, to me, a beautiful sight it is, to see those two noble horses obeying that little boy, whom they could kill with a single kick.

But, beside all this, there is a question which ought to be a curious one to you (for I suspect you cannot answer it)—Why does the farmer take the trouble to send his cart and horses eight miles and more, to draw in chalk from Odiham chalk pit?

Oh, he is going to put it on the land, of course. They are chalking the bit at the top of the next field, where the copse was grubbed.

But what good will he do by putting chalk on it? Chalk is not rich and fertile, like manure. It is altogether poor, barren stuff: you know that, or ought to know it. Recollect the chalk cuttings and banks on the railway between Basingstoke and Winchester—how utterly barren they are. Though they have been open these thirty years, not a blade of grass, hardly a bit of moss, has grown on them, or will grow, perhaps, for centuries.

Come, let us find out something about the chalk before we talk about the caves. The chalk is here, and the caves are not; and "Learn from the thing which lies nearest you" is as good a rule as "Do the duty which lies nearest you." Let us come into the grubbed bit, and ask the farmer—there he is in his gig.

Well, old friend, and how are you? Here is a little boy who wants to know why you are putting chalk on your field?

Does he then? If he ever tries to farm round here, he will have to learn for his first rule—No chalk, no wheat.

But why?

Why, is more than I can tell, young squire. But if you want to see how it comes about, look here at this freshly grubbed land—how sour it is. You can see that by the color of it—some black, some red, some green, some yellow, all full of sour iron, which will let nothing grow. After the chalk has been on it a year or two, those colors will have all gone out of it; and it will turn to a nice wholesome brown, like the rest of the field; and then you will know that the land is sweet, and fit for any crop. Now do you mind what I tell you, and then I'll tell you something more. We put on the chalk because, beside sweetening the land, it will hold water. You see, the land about here, though it is often very wet from springs, is sandy and hungry; and when we drain the bottom water out of it, the top water (that is, the rain) is apt to run through it too fast: and then it dries and burns up; and we get no plant of wheat, nor of turnips either. So we put on chalk to hold water, and keep the ground moist.

But how can these lumps of chalk hold water? They are not made like cups.

No: but they are made like sponges, which serves our turn better still. Just take up that lump, young squire, and you'll see water enough in it, or rather looking out of it, and staring you in the face.

Why! one side of the lump is all over thick ice.

So it is. All that water was inside the chalk last night, till it froze. And then it came squeezing out of the holes in the chalk in strings, as you may see it if you break the ice across. Now you may judge for yourself how much

water a load of chalk will hold, even on a dry summer's day. And now, if you'll excuse me, sir, I must be off to market.

Was it all true that the farmer said?

Quite true, I believe. He is not a scientific man—that is, he does not know the chemical causes of all these things; but his knowledge is sound and useful, because it comes from long experience. He and his forefathers, perhaps for a thousand years and more, have been farming this country, reading Madam How's books with very keen eyes, experimenting and watching, very carefully and rationally; making mistakes often, and failing and losing their crops and their money: but learning from their mistakes, till their empiric knowledge, as it is called, helps them to grow sometimes quite as good crops as if they had learned agricultural chemistry.

What he meant by the chalk sweetening the land you would not understand yet, and I can hardly tell you; for chemists are not yet agreed how it happens. But he was right; and right, too, what he told you about the water inside the chalk, which is more important to us just now; for, if we follow it out, we shall surely come to a cave at last.

So now for the water in the chalk. You can see now why the chalk-downs at Winchester are always green, even in the hottest summer: because Madam How has put under them her great chalk sponge. The winter rains soak into it; and the summer heat draws that rain out of it again as invisible steam, coming up from below, to keep the roots of the turf cool and moist under the blazing sun.

You love that short turf well. You love to run and race over the downs with your butterfly-net and hunt "chalk-hill blues," and "marbled whites," and "spotted burnets," till you are hot and tired; and then to sit down and look at the quiet little old city below, with the long cathedral roof, and the tower of St. Cross, and the gray old walls and buildings shrouded by noble trees, all embosomed among the soft rounded lines of the chalk hills; and then you begin to feel very thirsty, and cry, "Oh, if there were but springs and brooks in the Downs, as there are at home!" But all the hollows are as dry as

the hill-tops. There is not a brook, or the mark of a watercourse, in one of them. You are like the Ancient Mariner in the poem, with

“Water, water everywhere,
Yet not a drop to drink.”

To get that you must go down and down, hundreds of feet, to the green meadows through which silver Itchen glides toward the sea. There you stand upon the bridge, and watch the trout in water so crystal-clear that you see every weed and pebble as if you looked through air. If ever there was pure water, you think, that is pure. Is it so? Drink some. Wash your hands in it and try. You feel that the water is rough, hard (as they call it,) quite different from the water at home, which feels as soft as velvet. What makes it so hard?

Because it is full of invisible chalk. In every gallon of that water there are, perhaps, fifteen grains of solid chalk, which was once inside the heart of the hills above. Day and night, year after year, the chalk goes down to the sea; and if there were such creatures as water-fairies—if it were true, as the old Greeks and Romans thought, that rivers were living things, with a Nymph who dwelt in each of them, and was its goddess or its queen,—then, if your ears were opened to hear her, the Nymph of Itchen might say to you :

“So, child, you think that I do nothing but, as your sister says when she sings Mr. Tennyson’s beautiful song,

“‘Chatter over stony ways,
In little sharps and trebles;
And bubble into eddying bays,
And babble on the pebbles.’”

Yes. I do that : and I love, as the Nymphs loved of old, men who have eyes to see my beauty, and ears to discern my song, and to fit their own song to it, and tell how

“‘I wind about, and in and out,
With here a blossom sailing,
And here and there a lusty trout,
And here and there a grayling.”

“And here and there a foamy flake
Upon me, as I travel
With many a silvery waterbreak
Above the golden gravel,

“And draw them all along, and flow
To join the brimming river.
For men may come and men may go,
But I go on for ever.’

Yes. That is all true : but if that were all, I should not be let to flow on for ever, in a world where Lady Why rules, and Madam How obeys. I only exist (like everything else, from the sun in heaven to the gnat which dances in his beam) on condition of working, whether we wish it or not, whether we know it or not. I am not an idle stream, only fit to chatter to those who bathe or fish in my waters, or even to give poets beautiful fancies about me. You little guess the work I do. For I am one of the daughters of Madam How, and, like her, work night and day, we know not why, though Lady Why must know. So day by day, and night by night, while you are sleeping (for I never sleep), I carry, delicate and soft as I am, a burden which giants could not bear : and yet I am never tired. Every drop of rain which the south-west wind brings from the West Indian seas gives me fresh life and strength to bear my burden : and it has need to do so ; for every drop of rain lays a fresh burden on me. Every root and weed which dies in every field ; every dead leaf which falls in the high woods of many a parish, from the Grange and Woodmancote, round to Farleigh and Preston, and so to Bighton and the Alresford downs ;—ay, every atom of manure which the farmers put on the land—foul enough then, but pure enough before it touches me—each of these, giving off a tiny atom of what men call carbonic acid, melts a tiny grain of chalk, and helps to send it down through the solid hill by one of the million pores and veins which at once feed and burden my springs. Ages on ages I have worked on thus, carrying the chalk into the sea. And ages on ages, it may be, I shall work on yet ; till I have done my work at last, and levelled the high downs into a flat sea-shore, with beds of flint gravel rattling in the shallow waves.”

She might tell you that ; and when she had told you, you would surely think of the clumsy chalk-cart rumbling down the hill and then of the graceful stream, bearing silently its invisible load of chalk ; and see how much more delicate and beautiful, as well as vast and wonderful, Madam How's work is than that of man.

But if you asked the Nymph why she worked on for ever, she could not tell you. For like the Nymphs of old, and the Hamadryads who lived in trees, and Undine, and the little Seamaiden, she would have no soul ; no reason ; no power to say why.

It is for you, who are a reasonable being, to guess why : or at least to listen to me if I guess for you, and say, perhaps—I can only say perhaps—that chalk may be going to make layers of rich marl in the sea between England and France ; and those marl-beds may be upheaved and grow into dry land, and be ploughed, and sowed, and reaped by a wiser race of men, in a better-ordered world than this : or the chalk may have even a nobler destiny before it. That may happen to it, which has happened already to many a grain of lime. It may be carried thousands of miles away to help in building up a coral reef (what that is I must tell you afterwards). That coral reef may harden into limestone beds. Those beds may be covered up, pressed, and, it may be, heated, till they crystallize into white marble : and out of it fairer statues be carved and grander temples built, than the world has ever yet seen.

And if that is not the reason why the chalk is being sent into the sea, then there is another reason, and probably a far better one. For, as I told you at first, Lady Why's intentions are far wiser and better than our fancies ; and she—like Him whom she obeys—is able to do exceeding abundantly, beyond all that we can ask or think.

But you will say now that we have followed the chalk-cart a long way, without coming to the cave.

You are wrong. We have come to the very mouth of the cave. All we have to do is to say—not “Open Sesame,” like Ali Baba in the tale of the Forty Thieves—but some word or two which Madam Why will teach us, and forthwith a hill will open, and we shall walk in, and behold rivers and cascades underground, stalactite pillars

and stalagmite statues, and all the wonders of the grottoes of Adelsburg Antiparos, or Kentucky.

Am I joking? Yes, and yet no; for you know that when I joke I am usually most in earnest. At least, I am now.

But there are no caves in chalk.

No, not that I ever heard of. There are though, in limestone, which is only a harder kind of chalk. Madam How could turn this chalk into hard limestone, I believe, even now; and in more ways than one: but in ways which would not be very comfortable or profitable for us Southern folk who live on it. I am afraid that—what between squeezing and heating—she would flatten us all out into phosphatic fossils, about an inch thick; and turn Winchester city into a “breccia” which would puzzle geologists a hundred thousand years hence. So we will hope that she will leave our chalk downs for the Itchen to wash gently away, while we talk about caves, and how Madam How scoops them out by water underground, just in the same way, only more roughly, as she melts the chalk.

Suppose, then, that these hills, instead of being soft, spongy chalk, were all hard limestone marble, like that of which the font in the church is made. Then the rain-water, instead of sinking through the chalk as now, would run over the ground down-hill, and if it came to a crack (a fault, as it is called) it would run down between the rock; and as it ran it would eat that hole wider and wider year by year, and make a swallow-hole—such as you may see in plenty if you ever go up Whernside, or any of the high hills in Yorkshire—unfathomable pits in the green turf, in which you may hear the water tinkling and trickling far, far underground.

And now, before we go a step further, you may understand why the bones of animals are so often found in limestone caves. Down such swallow-holes how many beasts must fall: either in hurry and fright, when hunted by lions and bears and such cruel beasts; or more often still in time of snow, when the holes are covered with drift; or, again, if they died on the open hill-sides, their bones might be washed in, in floods, along with mud and stones, and buried with them in the cave below; and

beside that, lions and bears and hyænas might live in the caves below, as we know they did in some caves, and drag in bones through the caves' mouths; or, again, savages might live in that cave, and bring in animals to eat, like the wild beasts; and so those bones might be mixed up, as we know they were, with things which the savages had left behind—like flint tools or beads; and then the whole would be hardened, by the dripping of the limestone water, into a paste of breccia just like this in my drawer. But the bones of the savages themselves you would seldom or never find mixed in it—unless some one had fallen in by accident from above. And why? (For there is a *Why?* to that question: and not merely a *How?*) Simply because they were men; and because God has put into the hearts of all men, even of the lowest savages, some sort of reverence for those who are gone; and has taught them to bury, or in some other way take care of, their bones.

But how is the swallow-hole sure to end in a cave?

Because it cannot help making a cave for itself if it has time.

Think: and you will see that it must be so. For that water must run somewhere; and so it eats its way out between the beds of the rock, making underground galleries, and at last caves and lofty halls. For it always eats, remember, at the bottom of its channel, leaving the roof alone. So it eats, and eats, more in some places and less in others, according as the stone is harder or softer, and according to the different direction of the rock-beds (what we call their dip and strike); till at last it makes one of those wonderful caverns about which you are so fond of reading,—such a cave as there actually is in the rocks of the mountain of Whernside, fed by the swallow-holes around the mountain top; a cave hundreds of yards long, with halls, and lakes, and waterfalls, and curtains and festoons of stalactite which have dripped from the roof and pillars of stalagmite which have been built up on the floor below. These stalactites (those tell me who have seen them) are among the most beautiful of all Madam How's work; sometimes like branches of roses or of grapes; sometimes like statues; sometimes like delicate curtains, and I know not what other beautiful

shapes ; I have never seen them, I am sorry to say ; and therefore I cannot describe them. But they are all made in the same way ; just in the same way as those little straight stalactites which you may have seen hanging, like icicles, in vaulted cellars, or under the arches of a bridge. The water melts more lime than it can carry, and drops some of it again, making fresh limestone grain by grain as it drips from the roof above ; and fresh limestone again where it splashes on the floor below : till, if it dripped long enough, the stalactite hanging from above would meet the stalagmite rising from below, and join in one straight round white graceful shaft, which would seem (but only seem) to support the roof of the cave. And out of that cave—though not always out of the mouth of it—will run a stream of water, which seems to you clear as crystal, though it is actually, like the Itchen at Winchester, full of lime ; so full of lime, that it makes beds of fresh limestone, which are called travertine—which you may see in Italy, and Greece, and Asia Minor ; or perhaps it petrifies, as you call it, the weeds in its bed, like that dropping-well at Knaresborough, of which you have often seen a picture. And the cause is this : the water is so full of lime, that it is forced to throw away some of it upon everything it touches, and so incrusts with stone—though it does not turn to stone—almost anything you put in it. You have seen, or ought to have seen, petrified moss and birds' nests and such things from Knaresborough Well : and now you know a little, though only a very little, of how the pretty toys are made.

Now, if you can imagine for yourself (though I suppose a little boy cannot) the amount of lime which one of these subterranean rivers would carry away, gnawing underground centuries after centuries, day and night, summer and winter, then you will not be surprised at the enormous size of caverns which may be seen in different parts of the world : but always I believe in limestone rock. You would not be surprised (though you would admire them) at the caverns of Adelsberg in Carniola (in the South of Austria, near the top of the Adriatic), which run, I believe for miles in length ; and in the lakes of which, in darkness from its birth until its death, lives that strange beast the Proteus, a sort of long newt which never comes

to perfection—I suppose for want of the genial sunlight which makes all things grow. But he is blind; and more, he keeps all his life the same feathery gills which newts have when they are babies, and which we have so often looked at through the microscope, to see the blood-globules run round and round inside. You would not wonder, either, at the Czirknitz Lake, near the same place, which at certain times of the year vanishes suddenly through chasms under water, sucking the fish down with it; and after a certain time boils suddenly up again from the depths, bringing back with it the fish, who have been swimming comfortably all the time in a subterranean lake; and bringing back too (and, extraordinary as this story is, there is good reason to believe it true) live wild ducks, who went down small and unfledged, and come back full-grown and fat, with water-weeds and small fish in their stomachs, showing they have had plenty to feed on underground. But—and this is the strangest part of the story, if true—they come up unfledged just as they went down, and are moreover blind from having been so long in darkness. After a while, however, folks say, their eyes get right, their feathers grow, and they fly away like other birds.

Neither would you be surprised (if you recollect that Madam How is a very old lady indeed, and that some of her work is very old likewise) at that Mammoth Cave in Kentucky, the largest cave in the known world, through which you may walk nearly ten miles on end; and in which a hundred miles of gallery have been explored already, and yet no end found to the cave. In it (the guides will tell you) there are “226 avenues, 47 domes, 8 cataracts, 23 pits, and several rivers;” and if that fact is not very interesting to you (as it certainly is not to me), I will tell you something which ought to interest you: that this cave is so immensely old that various kinds of little animals, who have settled themselves in the outer parts of it, have had time to change their shape, and to become quite blind; so that blind fathers and mothers have blind children, generation after generation.

There are blind rats there, with large shining eyes which cannot see; blind landcrabs, who have the foot-stalks of their eyes (you may see them in any crab) still

left : but the eyes which should be on the top of them are gone. There are blind fish, too, in the cave ; and blind insects : for, if they have no use for their eyes in the dark, why should Madam How take the trouble to finish them off ?

One more cave I must tell you of, to show you how old some caves must be ; and then I must stop : and that is the cave of Caripé in Venezuela, which is the most northerly part of South America. There, in the face of a limestone cliff, crested with enormous flowering trees, and festooned with those lovely creepers of which you have seen a few small ones in hothouses, there opens an arch as big as the west front of Winchester Cathedral, and runs straight in like a cathedral nave for more than 1,400 feet. Out of it runs a stream ; and along the banks of that stream, as far as the sunlight strikes in, grow wild bananas, and palms, and lords and ladies (as you call them), which are not, like ours, one foot, but many feet high. Beyond that the cave goes on, with subterranean streams, cascades, and halls, no man yet knows how far. A friend of mine last year went in further, I believe, than any one yet has gone ; but, instead of taking Indian torches made of bark and resin, or even torches made of Spanish wax, such as a brave bishop of those parts used once when he went in further than anyone before him, he took with him some of that beautiful magnesium light which you have seen often here at home. And in one place, when he lighted up the magnesium, he found himself in a hall full 300 feet high—higher far, that is, than the dome of St. Paul's—and a very solemn thought it was to him, he said, that he had seen what no other human being ever had seen ; and that no ray of light had ever struck on that stupendous roof in all the ages since the making of the world. But if he found out something which he did not expect, he was disappointed in something which he did expect. For the Indians warned him of a hole in the floor which (they told him) was an unfathomable abyss. And lo and behold, when he turned the magnesium light upon it, the said abyss was just about eight feet deep. But it is no wonder that the poor Indians with their little smoky torches should make such mistakes ; no wonder, too, that they should

be afraid to enter far into those gloomy vaults ; that they should believe that the souls of their ancestors live in that dark cave ; and that they should say that when they die they will go to the Guacharos, as they call the birds that fly with doleful screams out of the cave to feed at night, and in again at daylight, to roost and sleep.

Now, it is these very Guacharo birds which are to me the most wonderful part of the story. The Indians kill and eat them for their fat, although they believe they have to do with evil spirits. But scientific men who have studied these birds will tell you that they are more wonderful than if all the Indians' fancies about them were true. They are great birds, more than three feet across the wings, somewhat like owls, somewhat like cuckoos, somewhat like goatsuckers : but, on the whole, unlike anything in the world but themselves ; and instead of feeding on moths or mice, they feed upon hard dry fruits, which they pick off the trees after the set of sun. And wise men will tell you, that in making such a bird as that, and giving it that peculiar way of life, and settling it in that cavern, and a few more caverns in that part of the world, and therefore in making the caverns ready for them to live in, Madam How must have taken ages and ages, more than you can imagine or count.

But that is among the harder lessons which come in the latter part of Madam How's book. Children need not learn them yet ; and they can never learn them, unless they master her alphabet, and her short and easy lessons for beginners, some of which I am trying to teach you now.

But I have just recollected that we are a couple of very stupid fellows. We have been talking all this time about chalk and limestone, and have forgotten to settle what they are, and how they were made. We must think of that next time. It will not do for us (at least if we mean to be scientific men) to use terms without defining them : in plain English, to talk about—we don't know what.

CHAPTER VIII.

MADAM HOW'S TWO GRANDSONS.

You want to know, then, what chalk is? I suppose you mean what chalk is made of?

Yes. That is it.

That we can only find out by calling in the help of a very great giant whose name is Analysis.

A giant?

Yes. And before we call for him I will tell you a very curious story about him and his younger brother, which is every word of it true.

Once upon a time, certainly as long ago as the first man, or perhaps the first rational being of any kind, was created, Madam How had two grandsons. The elder is called Analysis, and the younger Synthesis. As for who their father and mother were, there have been so many disputes on that question that I think children may leave it alone for the present. For my part, I believe that they are both, like St. Patrick, "gentlemen, and come of decent people;" and I have a great respect and affection for them both, as long as each keeps in his own place, and minds his own business.

Now you must understand that, as soon these two baby giants were born, Lady Why, who sets everything to do that work for which it is exactly fitted, set both of them their work. Analysis was to take to pieces everything he found, and find out how it was made. Synthesis was to put the pieces together again, and make something fresh out of them. In a word, Analysis was to teach men Science; and Synthesis to teach them Art.

But because Analysis was the elder, Madam How commanded Synthesis never to put the pieces together till Analysis had taken them completely apart. And, my child, if Synthesis had obeyed that rule of his good old grandmother's, the world would have been far happier, wealthier, wiser, and better than it is now,

But Synthesis would not. He grew up a very noble boy. He could carve, he could paint, he could build, he could make music, and write poems : but he was full of conceit and haste. Whenever his elder brother tried to do a little patient work in taking things to pieces, Synthesis snatched the work out of his hands before it was a quarter done, and began putting it together again to suit his own fancy, and, of course, put it together wrong. Then he went on to bully his elder brother, and locked him up in prison, and starved him, till for many hundred years poor Analysis never grew at all, but remained dwarfed, and stupid, and all but blind for want of light ; while Synthesis, and all the hasty conceited people who followed him, grew stout and strong and tyrannous, and overspread the whole world, and ruled it at their will. But the fault of all the work of Synthesis was just this : that it would not work. His watches would not keep time, his soldiers would not fight, his ships would not sail, his houses would not keep the rain out. So every time he failed in his work he had to go to poor Analysis in his dungeon, and bully him into taking a thing or two to pieces, and giving him a few sound facts out of them, just to go on with till he came to grief again, boasting in the meantime that he and not Analysis had found out the facts. And at last he grew so conceited that he fancied he knew all that Madam How could teach him, or Lady Why either, and that he understood all things in heaven and earth ; while it was not the real heaven and earth that he was thinking of, but a sham heaven and a sham earth, which he had built up out of his guesses and his own fancies.

And the more Synthesis waxed in pride, and the more he trampled upon his poor brother, the more reckless he grew, and the more willing to deceive himself. If his real flowers would not grow, he cut out paper flowers, and painted them and said that they would do just as well as natural ones. If his dolls would not work, he put strings and wires behind them, to make them nod their heads and open their eyes, and then persuaded other people, and perhaps half-persuaded himself, that they were alive. If the hand of his weather-glass went down, he nailed it up to ensure a fine day, and tortured, burnt, or murdered every one who said it did not keep up of itself. And many other foolish and

wicked things he did, which little boys need not hear of yet.

But at last his punishment came, according to the laws of his grandmother, Madam How, which are like the laws of the Medes and Persians, and alter not, as you and all mankind will sooner or later find ; for he grew so rich and powerful, that he grew careless and lazy, and thought about nothing but eating and drinking, till people began to despise him more and more. And one day he left the dungeon of Analysis so ill guarded, that Analysis got out and ran away. Great was the hue and cry after him ; and terribly would he have been punished had he been caught. But, lo and behold ! folks had grown so disgusted with Synthesis that they began to take the part of Analysis. Poor men hid him in their cottages, and scholars in their studies. And when war arose about him,—and terrible wars did arise,—good kings, wise statesmen, gallant soldiers, spent their treasure and their lives in fighting for him. All honest folk welcomed him, because he was honest ; and all wise folk used him, for, instead of being a conceited tyrant like Synthesis, he showed himself the most faithful, diligent, humble of servants, ready to do every man's work, and answer every man's questions. And among them all he got so well fed that he grew very shortly into the giant that he ought to have been all along ; and was, and will be for many a year to come, perfectly able to take care of himself.

As for poor Synthesis, he really has fallen so low in these days, that one cannot but pity him. He now goes about humbly after his brother, feeding on any scraps that are thrown to him, and is snubbed and rapped over the knuckles, and told one minute to hold his tongue and mind his own business, and the next that he has no business at all to mind, till he has got into such a poor way that some folks fancy he will die, and are actually digging his grave already, and composing his epitaph. But they are trying to wear the bear's skin before the bear is killed ; for Synthesis is not dead, nor anything like it ; and he will rise up again some day, to make good friends with his brother Analysis, and by his help do nobler and more beautiful work than he has ever yet done in the world.

So now Analysis has got the upper hand ; so much

so that he is in danger of beingspoilt by too much prosperity, as his brother was before him ; in which case he too will have his fall ; and a great deal of good it will do him. And that is the end of my story, and a true story it is.

Now you must remember, whenever you have to do with him, that Analysis, like fire, is a very good servant, but a very bad master. For, having got his freedom only of late years or so, he is, like young men when they come suddenly to be their own masters, apt to be conceited, and to fancy that he knows everything, when really he knows nothing, and can never know anything, but only knows about things, which is a very different matter. Indeed, nowadays he pretends that he can teach his old grandmother, Madam How, not only how to suck eggs, but to make eggs into the bargain ; while the good old lady just laughs at him kindly, and lets him run on, because she knows he will grow wiser in time, and learn humility by his mistakes and failures, as I hope you will from yours.

However, Analysis is a very clever young giant, and can do wonderful work as long as he meddles only with dead things, like this bit of lime. He can take it to pieces, and tell you of what things it is made, or seems to be made ; and take them to pieces again, and tell you what each of them is made of ; and so on, till he gets conceited, and fancies that he can find out some one Thing of all things (which he calls matter), of which all other things are made ; and some Way of all ways (which he calls force), by which all things are made : but when he boasts in that way, old Madam How smiles, and says, " My child, before you can say that, you must remember a hundred things which you are forgetting, and learn a hundred thousand things which you do not know ; " and then she just puts her hand over his eyes, and Master Analysis begins groping in the dark, and talking the saddest nonsense. So beware of him, and keep him in his own place, and to his own work, or he will flatter you, and get the mastery of you, and persuade you that he can teach you a thousand things of which he knows no more than he does why a duck's egg never hatches into a chicken. And remember, if Master Analysis ever grows saucy and con-

ceited with you, just ask him that last riddle, and you will shut him up at once.

And why?

Because Analysis can only explain to you a little about dead things, like stones—inorganic things, as they are called. Living things—organisms, as they are called—he cannot explain to you at all. When he meddles with them, he always ends like the man who killed his goose to get the golden eggs. He has to kill his goose, or his flower, or his insect, before he can analyze it: and then it is not a goose, but only the corpse of a goose; not a flower, but only the dead stuff of the flower.

And therefore he will never do anything but fail, when he tries to find out the life in things. How can he, when he has to take the life out of them first? He could not even find out how a plum-pudding is made by merely analyzing it. He might part the sugar, and the flour, and the suet; he might even (for he is very clever, and very patient too, the more honor to him) take every atom of sugar out of the flour with which it had got mixed, and every atom of brown color which had got out of the plums and currants into the body of the pudding, and then, for aught I know, put the coloring matter back again into the plums and currants; and then, for aught I know, turn the boiled pudding into a raw one again,—for he is a great conjurer, as Madam How's grandson is bound to be: but yet he would never find out how the pudding was made, unless some one told him the great secret which the sailors in the old story forgot—that the cook boiled it in a cloth.

This is Analysis' weak point—don't let it be yours—that in all his calculations he is apt to forget the cloth, and indeed the cook likewise. No doubt he can analyze the matter of things: but he will keep forgetting that he cannot analyze their form.

Do I mean their shape?

No, my child; no. I mean something which makes the shape of things, and the matter of them likewise, but which folks have lost sight of nowadays, and do not seem likely to get sight of again for a few hundred years. So I suppose that you need not trouble your head about it, but may just follow the fashions as long as they last.

About this piece of lime, however, Analysis can tell us a great deal. And we may trust what he says, and believe that he understands what he says.

Why?

Think now. If you took your watch to pieces, you would probably spoil it for ever; you would have perhaps broken, and certainly mislaid, some of the bits; and not even a watchmaker could put it together again. You would have analyzed the watch wrongly. But if a watchmaker took it to pieces, then any other watchmaker could put it together again to go as well as ever, because they both understand the works, how they fit into each other, and what the use and the power of each is. Its being put together again rightly would be a proof that it had been taken to pieces rightly.

And so with Master Analysis. If he can take a thing to pieces so that his brother Synthesis can put it together again, you may be sure that he has done his work rightly.

Now he can take a bit of chalk to pieces, so that it shall become several different things, none of which is chalk, or like chalk at all. And then his brother Synthesis can put them together again, so that they shall become chalk, as they were before. He can do that very nearly, but not quite. There is, in every average piece of chalk, something which he cannot make into chalk again when he has once unmade it.

What that is I will show you presently; and a wonderful tale hangs thereby. But first we will let Analysis tell us what chalk is made of, as far as he knows.

He will say—Chalk is carbonate of lime.

But what is carbonate of lime made of?

Lime and carbonic acid.

And what is lime?

The oxide of a certain metal, called calcium.

What do you mean?

That quicklime is a certain metal mixed with oxygen gas; and slacked lime is the same, mixed with water.

So lime is a metal. What is a metal?

Nobody knows.

And what is oxygen gas?

Nobody knows.

Well, Analysis stops short very soon. He does not seem to know much about the matter.

Nay, nay, you are wrong there. It is just "about the matter" that he does know, and knows a great deal, and very accurately; what he does not know is the matter itself. He will tell you wonderful things about oxygen gas—how the air is full of it, the water full of it, every living thing full of it; how it changes hard bright steel into soft, foul rust; how a candle cannot burn without it, or you live without it. But what it is he knows not.

Will he ever know?

That is Lady Why's concern, and not ours. Meanwhile he has a right to find out if he can. But what do you want to ask him next?

What? Oh! what carbonic acid is.

He can tell you that. Carbon and oxygen gas.

But what is carbon?

Nobody knows.

Why, here is this stupid Analysis at fault again.

Nay, nay, again. Be patient with him. If he cannot tell you what carbon is, he can tell you what is carbon, which is well worth knowing. He will tell you, for instance, that every time you breathe or speak, what comes out of your mouth is carbonic acid; and that, if your breath comes on a bit of slacked lime, it will begin to turn it back into the chalk from which it was made; and that, if your breath comes on the leaves of a growing plant, that leaf will take the carbon out of it, and turn it into wood. And surely that is worth knowing,—that you may be helping to make chalk, or to make wood, every time you breathe.

Well; that is very curious.

But now, ask him, What is carbon? And he will tell you, that many things are carbon. A diamond is carbon; and so is blacklead; and so is charcoal and coke, and coal in part, and wood in part.

What? Does Analysis say that a diamond and charcoal are the same thing?

Yes.

Then his way of taking things to pieces must be a very clumsy one, if he can find out no difference between diamond and charcoal.

Well, perhaps it is; but you must remember that, though he is very old—as old as the first man who ever lived—he has only been at school for the last three hundred years or so. And remember, too, that he is not like you, who have some one else to teach you. He has had to teach himself, and find out for himself, and make his own tools, and work in the dark besides. And I think it is very much to his credit that he ever found out that diamond and charcoal were the same things. You would never have found it out for yourself, you will agree.

No; but how did he do it?

He taught a very famous chemist, Lavoisier, about ninety years ago, how to burn a diamond in oxygen—and a very difficult trick that is;—and Lavoisier found that the diamond when burnt turned almost entirely into carbonic acid and water, as blacklead and charcoal do; and more, that each of them turned into the same quantity of carbonic acid. And so he knew, as surely as man can know anything, that all these things, however different to our eyes and fingers, are really made of the same thing,—pure carbon.

But what makes them look and feel so different?

That Analysis does not know yet. Perhaps he will find out some day; for he is very patient, and very diligent, as you ought to be. Meanwhile, be content with him: remember that though he cannot see through a milestone yet, he can see further into one than his neighbors. Indeed his neighbors cannot see into a milestone at all, but only see the outside of it, and know things only by rote, like parrots, without understanding what they mean and how they are made.

So now remember that chalk is carbonate of lime, and that it is made up of three things, calcium, oxygen, and carbon; and that therefore its mark is CaCO_3 in Analysis language, which I hope you will be able to read some day. But how is it that Analysis and Synthesis cannot take all this chalk to pieces, and put it together again?

Look here; what is that in the chalk?

Oh! a shepherd's crown, such as we often find in the gravel, only fresh and white.

Well; you know what that was once. I have often

told you :—a live sea-egg, covered with prickles, which crawls at the bottom of the sea.

Well, I am sure that Master Synthesis could not put that together again : and equally sure that Master Analysis might spend ages in taking it to pieces, before he found out how it was made. And—we are lucky to-day, for this lower chalk to the south has very few fossils in it—here is something else which is not mere carbonate of lime. Look at it.

A little cockle, something like a wrinkled hazelnut.

No ; that is no cockle. Madame How invented that ages and ages before she thought of cockles ; and the animal which lived inside that shell was as different from a cockle-animal as a sparrow is from a dog. That is a *Terebratula*, a gentleman of a very ancient and worn-out family. He and his kin swarmed in the old seas, even as far back as the time when the rocks of the Welsh mountains were soft mud ; as you will know when you read that great book of Sir Roderick Murchison's, "*Siluria*." But as the ages rolled on, they got fewer and fewer, these *Terebratulæ* ; and now there are hardly any of them left, only six or seven sorts are left about these islands, which cling to stones in deep water ; and the first time I dredged two of them out of Loch Fyne, I looked at them with awe, as on relics from another world which had lasted on through unnumbered ages and changes, such as one's fancy could not grasp.

But you will agree that, if Master Analysis took that shell to pieces, Master Synthesis would not be likely to put it together again ; much less to put it together in the right way, in which Madam How made it.

And what was that ?

By making a living animal, which went on growing, that is, making itself ; and making, as it grew, its shell to live in. Synthesis has not found out yet the first step towards doing that ; and, as I believe, he never will.

But there would be no harm in his trying.

Of course not. Let everybody try to do everything they fancy. Even if they fail, they will have learnt at least that they cannot do it.

But now—and this is a secret which you would never find out for yourself, at least without the help of a mi-

roscope—the greater part of this lump of chalk is made up of things which neither Analysis can perfectly take to pieces, nor Synthesis put together again. It is made of dead organisms, that is, things which have been made by living creatures. If you washed and brushed that chalk into powder, you would find it full of little things like the *Dentalina*, and many other curious forms. I will show you some under the microscope one day.

They are the shells of animals called *Foraminifera*, because the shells of some of them are full of holes, through which they put out tiny arms. So small they are and so many, that there may be, it is said, forty thousand of them in a bit of chalk an inch every way. In numbers past counting, some whole, some broken, some ground to the finest powder, they make up vast masses of England, which are now chalk downs; and in some foreign countries they make up whole mountains. Part of the building stone of the Great Pyramid in Egypt is composed, I am told, entirely of them.

And how did they get into the chalk?

Ah! how indeed? Let us think. The chalk must have been laid down at the bottom of a sea, because there are sea-shells in it. Besides, we find little atomies exactly like these alive now in many seas; and therefore it is fair to suppose these lived in the sea also.

Besides, they were not washed into the chalk by any sudden flood. The water in which they settled must have been quite still, or these little delicate creatures would have been ground into powder—or rather into paste. Therefore learned men soon made up their minds that these things were laid down at the bottom of a deep sea, so deep that neither wind, nor tide, nor currents could stir the everlasting calm.

Ah! it is worth thinking over, for it shows how shrewd a giant Analysis is, and how fast he works in these days, now that he has got free and well fed;—worth thinking over, I say, how our notions about these little atomies have changed during the last forty years.

We used to find them sometimes washed up among the sea-sand on the wild Atlantic coast; and we were taught, in the days when old Dr. Turton was writing his books on British shells at Bideford, to call them *Nautili*, because

their shells were like Nautilus shells. Men did not know then that the animal which lives in them is no more like a Nautilus animal than it is like a cow.

For a Nautilus, you must know, is made like a cuttle-fish, with eyes, and strong jaws for biting, and arms round them ; and has a heart, and gills, and a stomach ; and is altogether a very well-made beast, and, I suspect, a terrible tyrant to little fish and sea-slugs, just as the cuttle-fish is. But the creatures which live in these little shells are about the least finished of Madam How's works. They have neither mouth nor stomach, eyes nor limbs. They are mere live bags full of jelly, which can take almost any shape they like, and thrust out arms—or what serve for arms—through the holes in their shells, and then contract them into themselves again, as this *Globigerina* does. What they feed on, how they grow, how they make their exquisitely-formed shells, whether, indeed, they are, strictly speaking, animals or vegetables, Analysis has not yet found out. But, when you come to read about them, you will find that they, in their own way, are just as wonderful and mysterious as a butterfly or a rose ; and just as necessary, likewise, to Madam How's work ; for out of them, as I have told you, she makes whole sheets of down, whole ranges of hills.

No one knew anything, I believe, about them, save that two or three kinds of them were found in chalk, till a famous Frenchman, called D'Orbigny, just thirty years ago, told the world how he had found many beautiful fresh kinds ; and, more strange still, that some of these kinds were still alive at the bottom of the Adriatic, and of the harbor of Alexandria, in Egypt.

Then in 1841 a gentleman named Edward Forbes—now with God—whose name will be forever dear to all who love science, and honor genius and virtue—found in the *Ægean Sea* “a bed of chalk,” he said, “full of *Foraminifera*, and shells of *Pteropods*,” forming at the bottom of the sea.

And what are *Pteropods* ?

What you might call sea-moths (though they are not really moths), which swim about on the surface of the water, while the right-whales suck them in tens of thousands into the great whalebone net which fringes

their jaws. Here are the names of them : 1. *Limacina* (on which the whales feed) ; and 2. *Hyalea*, a lovely little thing in a glass shell, which lives in the Mediterranean.

But since then strange discoveries have been made, especially by the naval officers who surveyed the bottom of the great Atlantic Ocean before laying down the electric cable between Ireland and America. And this is what they found :

That at the bottom of the Atlantic were vast plains of soft mud, in some places 2,500 fathoms (15,000 feet) deep ; that is, as deep as the Alps are high. And more : they found out, to their surprise, that the oozy mud of the Atlantic floor was made up almost entirely of just the same atomies as make up our chalk, especially *Globigerinas* ; that, in fact, a vast bed of chalk was now forming at the bottom of the Atlantic, with living shells and sea-animals of the most brilliant colors crawling about on it in black darkness, and beds of sponges growing out of it, just as the sponges grew at the bottom of the old chalk ocean, and were all, generation, after generation turned into flints.

And, for reasons, which you will hardly understand, men are beginning now to believe that the chalk has never ceased to be made, somewhere or other, for many thousand years, ever since the Winchester Downs were at the bottom of the sea ; and that "the *Globigerina*-mud is not merely a chalk formation, but a continuation of the chalk formation, so *that we may be said to be still living in the age of Chalk.*"* Ah, my little man, what would I not give to see you, before I die, add one such thought as that to the sum of human knowledge !

So there the little creatures have been lying, making chalk out of the lime in the sea-water, layer over layer, the young over the old, the dead over the living, year after year, age after age—for how long ?

* I could not resist the temptation of quoting this splendid generalization from Dr. Carpenter's "Preliminary Report of the Dredging Operations of H. M. S. *Lightning*," 1868. He attributes it, generously, to his colleague, Dr. Wyville Thomson. Be it whose it may, it will mark (as will probably the whole Report when completed) a new era in Bio-Geology.

Who can tell? How deep the layer of new chalk at the bottom of the Atlantic is, we can never know. But the layer of live atomies on it is not an inch thick, probably not a tenth of an inch. And if it grew a tenth of an inch a year, or even a whole inch, how many years must it have taken to make the chalk of our Downs, which is in some parts 1,300 feet thick? How many inches are there in 1,300 feet? Do that sum, and judge for yourself.

One difference will be found between the chalk now forming at the bottom of the ocean, if it ever become dry land, and the chalk on which you tread on the Downs. The new chalk will be full of the teeth and bones of whales; warm-blooded creatures, who suckle their young like cows, instead of laying eggs, like birds and fish. For there were no whales in the old chalk ocean: but our modern oceans are full of cachalots, porpoises, dolphins, swimming in shoals round any ship; and their bones and teeth, and still more their ear-bones, will drop to the bottom as they die, and be found, ages hence, in the mud which the live atomies make, along with wrecks of mighty ships.

“Great anchors, heaps of pearl,”

and all that man has lost in the deep seas. And sadder fossils yet, my child, will be scattered on those white plains:—

“To them the love of woman hath gone down,
Dark roll their waves o’er manhood’s noble head,
O’er youth’s bright locks, and beauty’s flowing crown;
Yet shall they hear a voice, ‘Restore the dead,’
Earth shall reclaim her precious things from thee,
Give back the dead, thou Sea!”

CHAPTER IX.

THE CORAL-REEF.

Now you want to know what I meant when I talked of a bit of lime going out to sea, and forming part of a coral island, and then of a limestone rock, and then of a marble statue. Very good. Then look at this stone.

What a curious stone ! Did it come from any place near here ?

No. It came from near Dudley, in Staffordshire, where the soils are worlds on worlds older than they are here, though they were made in the same way as these and all other soils. But you are not listening to me.

Why, the stone is full of shells, and bits of coral ; and what are these wonderful things coiled and tangled together, like the snakes in Medusa's hair in the picture ? Are they snakes ?

If they are, then they must be snakes who have all one head ; for see, they are joined together at their larger ends ; and snakes which are branched, too, which no snake ever was.

Yes. I suppose they are not snakes. And they grow out of a flower, too ; and it has a stalk, jointed too, as plants sometimes are ; and as fishes' back-bones are, too. Is it a petrified plant or flower ?

No ; though I do not deny that it looks like one. The creature most akin to it which you ever saw is a star-fish.

What ! one of the red star-fishes which one finds on the beach ? Its arms are not branched.

No. But there are star-fishes with branched arms still in the sea. You know that pretty book (and learned book, too), Forbes' " British Star-fishes ? " You like to look it through for the sake of the vignettes,—the mermaid and her child playing in the sea.

Oh yes, and the kind bogie who is piping while the sandstars dance ; and the other who is trying to pull out the star-fish which the oyster has caught.

Yes. But do you recollect the drawing of the Medusa's head, with its curling arms, branched again and again without end? Here it is. No, you shall not look at the vignettes now. We must mind business. Now look at this one; the Feather-star, with arms almost like fern-fronds. And in foreign seas there are many other branched star-fish beside.

But they have no stalks?

Do not be too sure of that. This very feather-star, soon after it is born, grows a tiny stalk, by which it holds on to corallines and sea-weeds; and it is not till afterwards that it breaks loose from that stalk, and swims away freely into the wide water. And in foreign seas there are several star-fish still who grow on stalks all their lives, as this fossil one did.

How strange that a live animal should grow on a stalk, like a flower!

Not quite like a flower. A flower has roots, by which it feeds in the soil. These things grow more like sea-weeds, which have no roots, but only hold on to the rock by the foot of the stalk, as a ship holds on by her anchor. But as for its being strange that live animals should grow on stalks, if it be strange it is common enough, like many far stranger things. For under the water are millions on millions of creatures, spreading for miles on miles, building up at last great reefs of rocks, and whole islands, which all grow rooted first to the rock, like sea-weeds; and what is more, they grow, most of them, from one common root, branching again and again, and every branchlet bearing hundreds of living creatures, so that the whole creature is at once one creature and many creatures. Do you not understand me?

No.

Then fancy to yourself a bush like that hawthorn bush, with numberless blossoms, and every blossom on that bush a separate living thing, with its own mouth, and arms, and stomach, budding and growing fresh live branches and fresh live flowers, as fast as the old ones die: and then you will see better what I mean.

How wonderful!

Yes; but not more wonderful than your finger, for it, too, is made up of numberless living things.

My finger made of living things ?

What else can it be ? When you cut your finger, does not the place heal ?

Of course.

And what is healing but growing again ? And how could the atoms of your finger grow, and make fresh skin, if they were not each of them alive ? There, I will not puzzle you with too much at once ; you will know more about all that some day. Only remember now, that there is nothing wonderful in the world outside you but has its counterpart of something just as wonderful, and perhaps more wonderful, inside you. Man is the microcosm, the little world, said the philosophers of old ; and philosophers nowadays are beginning to see that their old guess is actual fact, and true.

But what are these curious sea-creatures called, which are animals, yet grow like plants ?

They have more names than I can tell you, or you remember. Those which helped to make this bit of stone are called coral-insects : but they are not really insects, and are no more like insects than you are. Coral-polypes is the best name for them, because they have arms round their mouths, something like a cuttle-fish, which the ancients called Polypus. But the animal which you have seen likest to most of them is a sea-anemone.

Look now at this piece of fresh coral—for coral it is, though not like the coral which your sister wears in her necklace. You see it is full of pipes ; in each of those pipes has lived what we will call, for the time being, a tiny sea-anemone, joined on to his brothers by some sort of flesh and skin ; and all of them together have built up, out of the lime in the sea-water, this common house, or rather town, of lime.

But is it not strange and wonderful ?

Of course it is : but so is everything when you begin to look into it ; and if I were to go on, and tell you what sort of young ones these coral-polypes have, and what becomes of them, you would hear such wonders that you would be ready to suspect that I was inventing nonsense, or talking in my dreams. But all that belongs to Madam How's deepest book of all, which is called the Book of Kind ; the book which children cannot understand, and

in which only the very wisest men are able to spell out a few words, not knowing, and of course not daring to guess, what wonder may come next.

Now we will go back to our story, and talk about how it was made, and how the stalked star-fish, which you mistook for a flower, ever got into the stone.

Then do you think me silly for fancying that a fossil star-fish was a flower?

I should be silly if I did. There is no silliness in not knowing what you cannot know. You can only guess about new things, which you have never seen before, by comparing them with old things, which you have seen before; and you had seen flowers, and snakes, and fishes' backbones, and made a very fair guess from them. After all, some of these stalked star-fish are so like flowers, lilies especially, that they are called *Encrinites*; and the whole family is called *Crinoids*, or lily-like creatures, from the Greek word *krinon*, a lily; and as for corals and corallines, learned men, in spite of all their care and shrewdness, made mistake after mistake about them, which they had to correct again and again, till now, I trust, they have got at something very like the truth. No, I shall only call you silly if you do what some little boys are apt to do—call other boys, and, still worse, servants or poor people, silly for not knowing what they cannot know.

But are not poor people often very silly about animals and plants? The boys at the village school say that slow-worms are poisonous; is not that silly?

Not at all. They know that adders bite, and so they think that slowworms bite too. They are wrong; and they must be told that they are wrong, and scolded if they kill a slowworm. But silly they are not.

But is it not silly to fancy that swallows sleep all the winter at the bottom of the pond?

I do not think so. The boys cannot know where the swallows go; and if you told them—what is true—that the swallows find their way every autumn through France, through Spain, over the Straits of Gibraltar, into Morocco, and some, I believe, over the great desert of the Sahara into Negroland: and if you told them—what is true also—that the young swallows actually find their way into Africa without having been along the road before; because

the old swallows go south a week or two first, and leave the young ones to guess out the way for themselves:—if you told them that, then they would have a right to say, “Do you expect us to believe that? That is much more wonderful than that the swallows should sleep in the pond.”

But is it?

Yes; to them. They know that bats, and dormice, and other things sleep all the winter: so why should not swallows sleep? They see the swallows about the water, and often dipping almost into it. They know that fishes live under water, and that many insects—like May-flies and caddis-flies and water-beetles—live sometimes in the water, sometimes in the open air; and they cannot know—you do not know—what it is which prevents a bird living under water. So their guess is really a very fair one; no more silly than that of the savages, who when they first saw the white men's ships, with their huge sails, fancied they were enormous sea-birds; and when they heard the cannons fire, said that the ships spoke in thunder and lightning. Their guess was wrong, but not silly; for it was the best guess they could make.

But I do know of one old woman who was silly. She was a boy's nurse, and she gave the boy a thing which she said was one of the snakes which St. Hilda turned into stone; and told him that they found plenty of them at Whitby, where she was born, all coiled up; but what was very odd, their heads had always been broken off. And when he took it to his father, he told him it was only a fossil shell—an Ammonite. And he went back, and laughed at his nurse, and teased her till she was quite angry.

Then he was very lucky that she did not box his ears, for that was what he deserved. I dare say that, though his nurse had never heard of Ammonites, she was a wise old dame enough, and knew a hundred things which he did not know, and which were far more important than Ammonites, even to him.

How?

Because if she had not known how to nurse him well, he would perhaps have never grown up alive and strong. And if she had not known how to make him obey and

speak the truth, he might have grown up a naughty boy.

But was she not silly?

No. She only believed what the Whitby folk, I understand, have some of them believed for many hundred years. And no one can be blamed for thinking as his forefathers did, unless he has cause to know better.

Surely she might have known better?

How? What reason could she have to believe the Ammonite was a shell? It is not the least like cockles, or wheelks, or any shell she ever saw.

What reason either could she have to guess that Whitby cliff had once been coral-mud at the bottom of the sea? No more reason, my dear child, than you would have to guess that this stone had been coral-mud likewise, if I did not teach you so,—or rather, try to make you teach yourself so.

No. I say it again. If you wish to learn, I will only teach you on condition that you do not laugh at, or despise, those good and honest and able people who do not know or care about these things, because they have other things to think of: like old John out there ploughing. He would not believe you—he would hardly believe me—if we told him that this stone had been once a swarm of living things, of exquisite shapes and glorious colors. And yet he can plough and sow, and reap and mow, and fell and strip, and hedge and ditch, and give his neighbors sound advice, and take the measure of a man's worth from ten minutes' talk, and say his prayers, and keep his temper, and pay his debts,—which last three things are more than a good many folks can do who fancy themselves a whole world wiser than John in the smock-frock.

Oh, but I want to hear about the exquisite shapes and glorious colors.

Of course you do, little man. A few fine epithets take your fancy far more than a little common sense and common humility; but in that you are no worse than some of your elders. So now for the exquisite shapes and glorious colors. I have never seen them: though I trust to see them ere I die. So what they are like I can only tell from what I have learnt from Mr. Darwin, and Mr. Wallace, and Mr. Jukes, and Mr. Gosse, and last, but not least, from one whose soul was as beautiful as his face, Lucas

Barrett,—too soon lost to science,—who was drowned in exploring such a coral-reef as this stone was once.

Then there are such things alive now?

Yes, and no. The descendants of most of them live on, altered by time, which alters all things; and from the beauty of the children we can guess at the beauty of their ancestors; just as from the coral-reefs which exist now we can guess how the coral-reefs of old were made. And that this stone was once part of a coral-reef the corals in it prove at first sight.

And what is a coral-reef like?

You have seen the room in the British Museum full of corals, madrepores, brain-stones, corallines, and sea-ferns?

Oh, yes.

Then fancy all those alive. Not as they are now, white stone: but covered in jelly; and out of every pore a little polype, like a flower, peeping out. Fancy them of every gaudy color you choose. No bed of flowers, they say, can be more brilliant than the corals, as you look down on them through the clear sea. Fancy, again, growing among them and crawling over them, strange sea-anemones, shells, star-fish, sea-slugs, and sea-cucumbers with feathery gills, crabs and shrimps, and hundreds of other animals, all as strange in shape, and as brilliant in color. You may let your fancy run wild. Nothing so odd, nothing so gay, even entered your dreams, or a poet's, as you may find alive at the bottom of the sea, in the live flower-gardens of the sea-fairies.

There will be shoals of fish, too, playing in and out, as strange and gaudy as the rest.—parrot-fish who browse on the live coral with their beaklike teeth, as cattle browse on grass; and at the bottom, it may be, larger and uglier fish, who eat the crabs and shell-fish, shells and all, grinding them up as a dog grinds a bone, and so turning shells and corals into fine soft mud such as this stone is partly made of.

But what happens to all the delicate little corals if a storm comes on?

What indeed? Madam How has made them so well and wisely, that, like brave and good men, the more trouble they suffer the stronger they are. Day and night;

week after week, the trade-wind blows upon them, hurling the waves against them in furious surf, knocking off great lumps of coral, grinding them to powder, throwing them over the reef into the shallow water inside. But the heavier the surf beats upon them, the stronger the polypes outside grow, repairing their broken houses, and building up fresh coral on the dead coral below, because it is in the fresh sea-water that beats upon the surf, that they find most lime with which to build. And as they build they form a barrier against the surf, inside of which, in water still as glass, the weaker and more delicate things can grow in safety, just as these very *Encrinites* may have grown, rooted in the lime-mud, and waving their slender arms at the bottom of the clear lagoon. Such mighty builders are these little coral polypes, that all the works of men are small compared with theirs. One single reef, for instance, which is entirely made by them, stretches along the north-east coast of Australia for nearly a thousand miles. Of this you must read some day in Mr. Jukes' "*Voyage of H.M.S. F/z*." Every island throughout a great part of the Pacific is fringed round each with its coral-reef, and there are hundreds of islands of strange shapes, and of Atolls as they are called, or ring-islands, which are composed entirely of coral, and of nothing else.

A ring-island? How can an island be made in the shape of a ring?

Ah! it was a long time before men found out that riddle. Mr. Darwin was the first to guess the answer, as he has guessed many an answer beside. These islands are each a ring, or nearly a ring, of coral, with smooth shallow water inside; but their outsides run down, like a mountain wall, sheer into seas hundreds of fathoms deep. People used to believe, and reasonably enough, that the coral polypes began to build up the islands from the very bottom of the deep sea. But that would not account for the top of them being of the shape of a ring; and in time it was found out that the corals would not build except in shallow water, twenty or thirty fathoms deep at most, and men were at their wit's end to find out the riddle. Then said Mr. Darwin, "Suppose one of those beautiful South Sea islands, like Tahiti, the Queen

of Isles, with its ring of coral reef all round its shore, began sinking slowly under the sea. The land, as it sunk, would be gone for good and all ; but the coral reef round it would not, because the coral polypes would build up and up continually upon the skeletons of their dead parents, to get to the surface of the water, and would keep close to the top outside, however much the land sunk inside ; and when the island had sunk completely beneath the sea, what would be left ? What must be left, but a ring of coral-reef, around the spot where the last mountain peak of the island sank beneath the sea ?” And so Mr. Darwin explained the shapes of hundreds of coral islands in the Pacific ; and proved, too, some strange things besides. He proved (and other men, like Mr. Wallace, whose excellent book on the East Indian islands you must read some day, have proved in other ways) that there was once a great continent, joined perhaps to Australia and to New Guinea, in the Pacific Ocean, where is now nothing but deep sea, and coral-reefs which mark the mountain ranges of that sunken world.

But how does the coral ever rise above the surface of the water and turn into hard stone ?

Of course the coral polypes cannot build above the high-tide mark ; but the surf which beats upon them piles up their broken fragments just as a sea-beach is piled up, and hammers them together with that water hammer which is heavier and stronger than any you have ever seen in a smith's forge. And then, as is the fashion of lime, the whole mass sets and becomes hard, as you may see mortar set ; and so you have a low island a few feet above the sea. Then sea-birds come to it, and rest and build ; and seeds are floated thither from far lands ; and among them almost always the cocoa-nut, which loves to grow by the sea-shore, and groves of cocoa palms grow up upon the lonely isle. Then, perhaps, trees and bushes are drifted thither before the trade-wind ; and entangled in their roots are seeds of other plants, and eggs or cocoons of insects ; and so a few flowers and a few butterflies and beetles set up for themselves upon the new land. And then a bird or two, caught in a storm and blown away to sea, finds shelter in the cocoa-grove ; and so a little new world is set up, in which (you must

remember always) there are no four-footed beasts, nor snakes, nor lizards, nor frogs, nor any animals that cannot cross the sea. And on some of those islands they may live (indeed there is reason to believe they have lived) so long, that some of them have changed their forms, according to the laws of Madam How, who sooner or later fits each thing exactly for the place in which it is meant to live, till upon some of them you may find such strange and unique creatures as the famous cocoa-nut crab, which learned men call *Birgus latro*. A great crab he is, who walks upon the tips of his toes a foot high above the ground. And because he has often nothing to eat but cocoa-nuts, or at least they are the best things he can find, cocoa-nuts he has learned to eat, and after a fashion which it would puzzle you to imitate. Some say that he climbs up the stems of the cocoa-nut trees, and pulls the fruit down for himself: but that, it seems, he does not usually do. What he does is this: when he finds a fallen cocoa-nut, he begins tearing away the thick husk and fibre with his strong claws; and he knows perfectly well which end to tear it from, namely, from the end where the three eye-holes are, which you call the monkey's face, out of one of which, you know, the young cocoa-nut tree would burst forth. And when he has got to the eye-holes, he hammers through one of them with the point of his heavy claw. So far, so good: but how is he to get the meat out? He cannot put his claw in. He has no proboscis like a butterfly to insert and suck with. He is as far off from his dinner as the fox was when the stork offered him a feast in a long-necked jar. What then do you think he does? He turns himself round, puts in a pair of his hind pincers, which are very slender, and with them scoops the meat out of the cocoa-nut, and so puts his dinner into his mouth with his hind-feet. And even the cocoa-nut husk he does not waste; for he lives in deep burrows which he makes, like a rabbit; and being a luxurious crab, and liking to sleep soft in spite of his hard shell, he lines them with a quantity of cocoa-nut fibre, picked out clean and fine, just as if he was going to make cocoa-nut matting of it. And being also a clean crab, as I hope you are a clean little boy, he goes down to the sea every night to have his bath and

moisten his gills, and so lives happy all his days, and gets so fat in his old age that he carries about his body nearly a quart of pure oil.

That is the history of the cocoa-nut crab. And if any one tells me that that crab acts only on what is called "instinct;" and does not think and reason, just as you and I think and reason, though of course not in words as you and I do : then I shall be inclined to say that that person does not think nor reason either.

Then were there many coral-reefs in Britain in old times?

Yes, many and many, again and again; some whole ages older than this, a bit of which you see, and some again whole ages newer. But look : then judge for yourself. Look at this geological map. Wherever you see a bit of blue, which is the mark for limestone, you may say, "There is a bit of old coral-reef rising up to the surface." But because I will not puzzle your little head with too many things at once, you shall look at one set of coral-reefs which are far newer than this bit of Dudley limestone, and which are the largest, I suppose, that ever were in this country; or, at least, there is more of them left than of any others.

Look first at Ireland. You see that almost all the middle of Ireland is colored blue. It is one great sheet of old coral-reef and coral-mud, which is now called the carboniferous limestone. You see red and purple patches rising out of it, like islands—and islands I suppose they were, of hard and ancient rock, standing up in the middle of the coral sea.

But look again, and you will see that along the west coast of Ireland, except in a very few places, like Galway Bay, the blue limestone does not come down to the sea; the shore is colored purple and brown, and those colors mark the ancient rocks and high mountains of Mayo and Galway and Kerry, which stand as barriers to keep the raging surf of the Atlantic from bursting inland and beating away, as it surely would in course of time, the low flat limestone plain of the middle of Ireland. But the same coral-reefs once stretched out far to the westward into the Atlantic Ocean; and you may see the proof upon that map. For in the western bays, in Clew Bay

with its hundred islands, and Galway Bay with its Isles of Arran, and beautiful Kenmare and beautiful Bantry, you see little blue spots, which are low limestone islands, standing in the sea, overhung by mountains far aloft. You have often heard of those islands in Kenmare Bay talked of, and how some whom you know go to fish round them by night for turbot and conger; and when you hear them spoken of again, you must recollect that they are the last fragments of a great fringing coral-reef, which will in a few thousand years follow the fate of the rest, and be eaten up by the waves, while the mountains of hard rock stand round them still unchanged.

Now look at England, and there you will see patches at least of a great coral-reef which was forming at the same time as that Irish one, and on which perhaps some of your schoolfellows have often stood. You have heard of St. Vincent's Rocks at Bristol, and the marble cliffs, 250 feet in height, covered in part with rich wood and rare flowers, and the Avon running through the narrow gorge, and the stately ships sailing far below your feet from Bristol to the Severn sea. And you may see, for here they are, corals from St. Vincent's Rocks, cut and polished, showing too, that they also, like the Dudley limestone, are made up of corals and of coral mud. Now, whenever you see St. Vincent's Rocks, as I suspect you very soon will, recollect where you are, and use your fancy, to paint for yourself a picture as strange as it is true. Fancy that those rocks are what they once were, a coral-reef close to the surface of a shallow sea. Fancy that there is no gorge of the Avon, no wide Severn sea—for those were eaten out by water ages and ages afterwards. But picture to yourself the coral sea reaching away to the north, to the foot of the Welsh mountains; and then fancy yourself, if you will, in a canoe, paddling up through the coral-reefs, north and still north, up the valley down which the Severn now flows, up through what is now Worcestershire, then up through Staffordshire, then through Derbyshire, into Yorkshire, and so on through Durham and Northumberland, till you find yourself stopped by the Etrick Hills in Scotland; while all to the westward of you, where is now the greater part of England, was open sea. You may say, if you know any-

thing of the geography of England, "Impossible! That would be to paddle over the tops of high mountains; over the top of the Peak in Derbyshire, over the top of High Craven and Wharfedale and Pen-y-gent and Cross-Fell, and to paddle too over the Cheviot-Hills, which part England and Scotland." I know it, my child, I know it. But so it was once on a time. The high limestone mountains which part Lancashire and Yorkshire—the very chine and backbone of England—were once coral-reefs at the bottom of the sea. They are all made up of the carboniferous limestone, so called, as your little knowledge of Latin ought to tell you, because it carries the coal; because the coalfields usually lie upon it. It may be impossible in your eyes: but remember always that nothing is impossible with God.

But you said that the coal was made from plants and trees, and did plants and trees grow on this coral-reef?

That I cannot say. Trees may have grown on the dry parts of the reef, as cocoa-nuts grow now in the Pacific. But the coal was not laid down upon it till long afterwards, when it had gone through many and strange changes. For all through the chine of England, and in a part of Ireland too, there lies upon the top of the limestone a hard gritty rock, in some places three thousand feet thick, which is commonly called "the mill-stone grit." And above that again the coal begins. Now to make that 3,000 feet of hard rock, what must have happened? The sea bottom must have sunk, slowly no doubt, carrying the coral-reefs down with it, 3,000 feet at least. And meanwhile sand and mud, made from the wearing away of the old lands in the North, must have settled down upon it. I say from the North—for there are no fossils, as far as I know, or sign of life, in these rocks of mill-stone grit; and therefore it is reasonable to suppose that they were brought from a cold current at the Pole, too cold to allow sea-beasts to live,—quite cold enough, certainly, to kill the coral insects, who could only thrive in warm water coming from the South.

Then, to go on with my story, upon the top of these mill-stone grits came sand and mud, and peat, and trees, and plants, washed out to sea, as far as we can guess, from the mouths of vast rivers flowing from the West,

rivers as vast as the Amazon, the Mississippi, or the Orinoco are now ; and so in long ages, upon the top of the limestone and upon the top of the mill-stone grit, were laid down those beds of coal which you see burnt now in every fire.

But how did the coral-reefs rise till they became cliffs at Bristol and mountains in Yorkshire ?

The earthquake steam, I suppose, raised them. One earthquake indeed, or series of earthquakes, there was, running along between Lancashire and Yorkshire, which made that vast crack and upheaval in the rocks, the Craven Fault, running, I believe, for more than a hundred miles, and lifting the rocks in some places several hundred feet. That earthquake helped to make the high hills which overhang Manchester and Preston and all the manufacturing county of Lancashire. That earthquake helped to make the perpendicular cliff at Malham Cove, and many another beautiful bit of scenery. And that and other earthquakes, by heating the rocks from the fires below, may have helped to change them from soft coral into hard crystalline marble as you see them now, just as volcanic heat has hardened and purified the beautiful white marbles of Pentelicus and Paros in Greece, and Carrara in Italy, from which statues are carved unto this day. Or the same earthquakes may have heated and hardened the limestones simply by grinding and squeezing them ; or they may have been heated and hardened in the course of long ages simply by the weight of the thousands of feet of other rock which lay upon them. For pressure, you must remember, produces heat. When you strike flint and steel together, the pressure of the blow not only makes bits of steel fly off, but makes them fly off in red-hot sparks. When you hammer a piece of iron with a hammer, you will soon find it get quite warm. When you squeeze the air together in your pop-gun, you actually make the air inside warmer, till the pellet flies out, and the air expands and cools again. Nay, I believe you cannot hold up a stone on the palm of your hand without that stone after a while warming your hand, because it presses against you in trying to fall, and you press against it in trying to hold it up. And recollect above all the great and beautiful

example of that law which you were lucky enough to see on the night of the 14th of November, 1867, how those falling stars, as I told you then, were coming out of boundless space, colder than any ice on earth, and yet, simply by pressing against the air above our heads, they had their motion turned into heat, till they burned themselves up into trains of fiery dust. So remember that wherever you have pressure you have heat, and that the pressure of the upper rocks upon the lower is quite enough, some think, to account for the older and lower rocks being harder than the upper and newer ones.

But why should the lower rocks be older and the upper ones newer? You told me just now that the high mountains in Wales were ages older than Windsor Forest upon which we stand: but yet how much lower we are here than if we were on a Welsh mountain.

Ah, my dear child, of course that puzzles you, and I am afraid it must puzzle you still till we have another talk; or rather it seems to me that the best way to explain that puzzle to you would be for you and me to go a journey into the far West, and look into the matter for ourselves; and from here to the far West we will go, either in fancy or on a real railroad and steamboat, before we have another talk about these things.

Now it is time to stop. Is there anything more you want to know? for you look as if something was puzzling you still.

Were there any men in the world while all this was going on?

I think not. We have no proof that there were not: but also we have no proof that there were; the cave-men, of whom I told you, lived many ages after the coal was covered up. You seem to be sorry that there were no men in the world then.

Because it seems a pity that there was no one to see those beautiful coral-reefs and coal-forests.

No one to see them, my child? Who told you that? Who told you there are not and never have been any rational beings in this vast universe, save certain weak, ignorant, short-sighted creatures shaped like you and me? But even if it were so, and no created eye had ever beheld those ancient wonders, and no created heart ever enjoyed

them, is there not One Uncreated who has seen them and enjoyed them from the beginning? Were not these creatures enjoying themselves each after their kind? And was there not a Father in heaven who was enjoying their enjoyment, and enjoying too their beauty, which He had formed according to the ideas of His Eternal Mind? Recollect what you were told on Trinity Sunday—That this world was not made for man alone: but that man, and this world, and the whole universe was made for God: for He created all things, and for His pleasure they are, and were created.

CHAPTER X.

FIELD AND WILD.

WHERE were we to go next? Into the far West, to see how all the way along the railroad the new rocks and soils lie above the older, and yet how, when we get westward, the oldest rocks rise highest into the air.

Well, we will go: but not, I think, to-day. Indeed I hardly know how we could get as far as Reading; for all the world is in the hayfield, and even the old horse must go thither too, and take his turn at the haycart. Well, the rocks have been where they are for many a year, and they will wait our leisure patiently enough: but Midsummer and the hayfield will not wait. Let us take what God gives when He sends it, and learn the lesson that lies nearest to us. After all, it is more to my old mind, and perhaps to your young mind too, to look at things which are young and fresh and living, rather than things which are old and worn and dead. Let us leave the old stones, and the old bones, and the old shells, the wrecks of ancient worlds which have gone down into the kingdom of death, to teach us their grand lessons some other day; and let us look now at the world of light and life and beauty, which begins here at the open door, and stretches away over the hayfields, over the woods, over the southern moors, over sunny France and sunnier Spain, and over the tropic seas, down to the equator, and the palm-groves of the eternal summer. If we cannot

find something, even at starting from the open door, to teach us about Why and How, we must be very short-sighted, or very shallow-hearted.

There is the old cock starling screeching in the eaves, because he wants to frighten us away, and take a worm to his children, without our finding out whereabouts his hole is. How does he know that we might hurt him? and how again does he not know that we shall not hurt him?—we who for five-and-twenty years have let him and his ancestors build under those eaves in peace? How did he get that quantity of half-wit, that sort of stupid cunning, into his little brain, and yet get no more? And why (for this is a question of Why, and not of How) does he labor all day long, hunting for worms and insects for his children, while his wife nurses them in the nest? Why, too, did he help her to build that nest with toil and care this spring, for the sake of a set of nestlings who can be of no gain or use to him, but only take the food out of his mouth? Simply out of—what shall I call it, my child?—Love; that same sense of love and duty, coming surely from that one Fountain of all duty and all love, which makes your father work for you. That the mother should take care of her young is wonderful enough: but that (at least among many birds) the father should help likewise, is (as you will find out as you grow older) more wonderful far. So there already the old starling has set us two fresh puzzles about How and Why, neither of which we shall get answered, at least on this side of the grave.

Come on, up the field, under the great generous sun, who quarrels with no one, grudges no one, but shines alike upon the evil and the good. What a gay picture he is painting now, with his light-pencils; for in them, remember, and not in the things themselves, the color lies.

See how, where the hay has been already carried, he floods all the slopes with yellow light, making them stand out sharp against the black shadows of the wood; while where the grass is standing still, he makes the sheets of sorrel-flower blush rosy red, or dapples the field with white oxeyes.

But is not the sorrel itself red, and the oxeyes white?

What color are they at night, when the sun is gone?

Dark.

That is no color. The very grass is not green at night.

Oh, but it is, if you look at it with a lantern.

No, no. It is the light of the lantern, which happens to be strong enough to make the leaves look green, though it is not strong enough to make a geranium look red.

Not red?

No; the geranium flowers by a lantern look black, while the leaves look green. If you don't believe me, we will try.

But why is that?

Why, I cannot tell: and how, you had best ask Professor Tyndall, if you ever have the honor of meeting him.

But now—hark to the mowing-machine, humming like a giant night-jar. Come up and look at it, and see how swift and smooth it shears the long grass down, so that in the middle of the swathe it seems to have merely fallen flat, and you must move it before you find out that it has been cut off.

Ah, there is a proof to us of what men may do if they will only learn the lessons which Madam How can teach them. There is that boy, fresh from the National School, cutting more grass in a day than six strong mowers could have cut, and cutting it better too; for the mowing-machine goes so much nearer to the ground than the scythe, that we gain by it two hundredweight of hay on ever acre. And see, too, how persevering old Madam How will not stop her work, though the machine has cut off all the grass which she has been making for the last three months; for as fast as we shear it off, she makes it grow again. There are fresh blades, here at our feet, a full inch long, which have sprung up in the last two days, for the cattle when they are turned in next week.

But if the machine cuts all the grass, the poor mowers will have nothing to do.

Not so. They are all busy enough elsewhere. There is plenty of other work to be done, thank God; and wholesomer and easier work than moving with a burning sun on their backs, drinking gallons of beer, and getting first hot and then cold across the loins, till they lay in a store of lumbago and sciatica, to cripple them in their old age. You delight in machinery because it is curious;

you should delight in it besides because it does good, and nothing but good, where it is used, according to the laws of Lady Why, with care, moderation, and mercy, and fair play between man and man. For example: just as the mowing-machine saves the mowers, the threshing-machine saves the threshers from rheumatism and chest complaints, which they used to catch in the draught and dust of the unhealthiest place in the whole parish, which is, the old-fashioned barn's floor. And so, we may hope, in future years all heavy drudgery and dirty work will be done more and more by machines, and people will have more and more chance of keeping themselves clean and healthy, and more and more time to read, and learn, and think, and be true civilized men and women, instead of being mere live ploughs, or live manure-carts, such as I have seen ere now.

A live manure-cart?

Yes, child. If you had seen, as I have seen, in foreign lands, poor women, haggard, dirty, grown old before their youth was over, toiling up hill with baskets of foul manure upon their backs, you would have said, as I have said, "Oh for Madam How to cure that ignorance! Oh for Lady Why to cure that barbarism! Oh that Madam How would teach them that machinery must always be cheaper in the long run than human muscles and nerves! Oh that Lady Why would teach them that a woman is the most precious thing on earth, and that if she be turned into a beast of burden, Lady Why—and Madam How likewise—will surely avenge the wrongs of their human sister!" There, you do not quite know what I mean, and I do not care that you should. It is good for little folk that big folk should now and then "talk over their heads," as the saying is, and make them feel how ignorant they are, and how many solemn and earnest questions there are in the world on which they must make up their minds some day, though not yet. But now we will talk about the hay; or rather do you and the rest go and play in the hay, and gather it up, build forts of it, storm them, pull them down, build them up again, shout, laugh, and scream till you are hot and tired. You will please Madam How thereby, and Lady Why likewise,

How?

Because Madam How naturally wants her work to succeed, and she is at work now making you.

Making me?

Of course. Making a man of you, out of a boy. And that can only be done by the life-blood which runs through and through you. And the more you laugh and shout, the more pure air will pass into your blood, and make it red and healthy; and the more you romp and play—unless you overtire yourself—the quicker will that blood flow through all your limbs, to make bone and muscle, and help you to grow into a man.

But why does Lady Why like to see us play?

She likes to see you happy, as she likes to see the trees and birds happy. For she knows well that there is no food, nor medicine either, like happiness. If people are not happy enough, they are often tempted to do many wrong deeds, and to think many wrong thoughts: and if by God's grace they know the laws of Lady Why, and keep from sin, still unhappiness, if it goes on too long, wears them out, body and mind; and they grow ill and die, of broken hearts, and broken brains, my child; and so at last, poor souls, find "Rest beneath the Cross."

Children, too, who are unhappy; children who are bullied, and frightened, and kept dull and silent, never thrive. Their bodies do not thrive; for they grow up weak. Their minds do not thrive; for they grow up dull. Their souls do not thrive; for they learn mean, sly, slavish ways, which God forbid you should ever learn. Well said the wise man, "The human plant, like the vegetables, can only flower in sunshine."

So do you go, and enjoy yourself in the sunshine; but remember this—You know what happiness is. Then if you wish to please Lady Why, and Lady Why's Lord and King likewise, you will never pass a little child without trying to make it happier, even by a passing smile. And now be off, and play in the hay, and come back to me when you are tired.

* * * * *

Let us lie down at the foot of this old oak, and see what we can see.

And hear what we can hear, too. What is that hum-

ming all round us, now that the noisy mowing-machine has stopped?

And as much softer than the noise of mowing-machine hum, as the machines which make it are more delicate and more curious. Madam How is a very skilful work-woman, and has eyes which see deeper and clearer than all microscopes; as you would find, if you tried to see what makes that "Midsummer hum" of which the hay-makers are so fond, because it promises fair weather.

Why, it is only the gnats and flies.

Only the gnats and flies? You might study those gnats and flies for your whole life without finding out all—or more than a very little—about them. I wish I knew how they move those tiny wings of theirs—a thousand times in a second, I dare say, some of them. I wish I knew how far they know that they are happy—for happy they must be, whether they know it or not. I wish I knew how they live at all. I wish I even knew how many sorts there are humming round us at this moment.

How many kinds? Three or four?

More probably thirty or forty round this single tree.

But why should there be so many kinds of living things? Would not one or two have done just as well?

Why, indeed? Why should there not have been only one sort of butterfly, and he only of one color, a plain brown, or a plain white?

And why should there be so many sorts of birds, all robbing the garden at once? Thrushes, and blackbirds, and sparrows, and chaffinches, and green finches, and bullfinches, and tomtits.

And there are four kinds of tomtits round here, remember: but we may go on with such talk forever. Wiser men than we have asked the same question: but Lady Why will not answer them yet. However, there is another question, which Madam How seems inclined to answer just now, which is almost as deep and mysterious.

What?

How all these different kinds of things became different.

Oh, do tell me!

Not I. You must begin at the beginning, before you

can end at the end, or even make one step towards the end,

What do you mean?

You must learn the differences between things, before you can find out how those differences came about. You must learn Madam How's alphabet before you can read her book. And Madam How's alphabet of animals and plants is, Species, Kinds of things. You must see which are like, and which unlike; what they are like in, and what they are unlike in. You are beginning to do that with your collection of butterflies. You like to arrange them, and those that are most like nearest to each other, and to compare them. You must do that with thousands of different kinds of things before you can read one page of Madam How's Natural History Book rightly.

But it will take so much time and so much trouble.

God grant that you may not spend more time on worse matters, and take more trouble over things which will profit you far less. But so it must be, willy nilly. You must learn the alphabet if you mean to read. And you must learn the value of the figures before you can do a sum. Why, what would you think of any one who sat down to play at cards—for money too (which I hope and trust you never will do)—before he knew the names of the cards, and which counted highest, and took the other?

Of course it would be very foolish.

Just as foolish are those who make up "theories" (as they call them) about this world, and how it was made, before they have found out what the world is made of. You might as well try to find out how this hayfield was made, without finding out first what the hay is made of.

How the hayfield was made? Was it not always a hayfield?

Ah, yes; the old story, my child: Was not the earth always just what it is now? Let us see for ourselves whether this was always a hayfield.

How?

Just pick out all the different kinds of plants and flowers you can find round us here. How many do you think there are?

Oh—there seem to be four or five.

Just as there were three or four kinds of flies in the air. Pick them, child, and count. Let us have facts.

How many? What? a dozen already?

Yes—and here is another, and another. Why, I have got I don't know how many.

Why not? Bring them here, and let us see. Nine kinds of grasses, and a rush. Six kinds of clovers and vetches; and besides, dandelion, and rattle, and oxeye, and sorrel, and plantain, and buttercup, and a little stitch-wort, and pignut and mouse-ear hawk-weed, too, which nobody wants.

Why?

Because they are a sign that I am not a good farmer enough, and have not quite turned my Wild into Field.

What do you mean?

Look outside the boundary fence, at the moors and woods; they are forest, Wild,—“Wald,” as the Germans would call it. Inside the fence is Field—“Feld,” as the Germans would call it. Guess why.

Is it because the trees inside have been felled?

Well, some say so, who know more than I. But now go over the fence, and see how many of these plants you can find on the moor.

Oh, I think I know. I am so often on the moor.

I think you would find more kinds outside than you fancy. But what do you know?

That, beside some short fine grass about the cattle paths, there are hardly any grasses on the moor save deer's hair and glade-grass; and all the rest is heath, and moss, and furze, and fern.

Softly—not all; you have forgotten the bog plants; and there are (as I said) many more plants beside on the moor than you fancy. But we will look into that another time. At all events, the plants outside are on the whole quite different from the hayfield.

Of course: that is what makes the field look green and the moor brown.

Not a doubt. They are so different, that they look like bits of two different continents. Scrambling over the fence is like scrambling out of Europe into Australia. Now, how was that difference made? Think. Don't

guess, but think. Why does the rich grass come up to the bank, and yet not spread beyond it?

I suppose because it cannot get over.

Not get over? Would not the wind blow the seeds, and the birds carry them? They do get over, in millions. I don't doubt, every summer.

Then why do they not grow?

Think.

Is there any difference in the soil inside and out?

A very good guess. But guesses are no use without facts. Look.

Oh, I remember now. I know now the soil of the field is brown, like the garden; and the soil of the moor all black and peaty.

Yes. But if you dig down two or three feet, you will find the soils of the moor and the field just the same. So perhaps the top soils were once both alike.

I know.

Well, and what do you think about it now? I want you to look and think. I want everyone to look and think. Half the misery in the world comes first from not looking, and then from not thinking. And I do not want you to be miserable.

But shall I be miserable if I do not find out such little things as this?

You will be miserable if you do not learn to understand little things: because then you will not be able to understand great things when you meet them. Children who are not trained to use their eyes and their common sense grow up the more miserable the cleverer they are.

Why?

Because they grow up what men call dreamers, and bigots, and fanatics, causing misery to themselves and to all who deal with them. So I say again, think.

Well, I suppose men must have altered the soil inside the bank.

Well done. But why do you think so?

Because, of course, some one made the bank; and the brown soil only goes up to it.

Well, that is something like common sense. Now you will not say any more, as the cows or the butterflies might, that the hayfield was always there.

And how did men change the soil?

By tilling it with the plough, to sweeten it, and manuring it, to make it rich.

And then did all these beautiful grasses grow up of themselves?

You ought to know that they most likely did not. You know the new enclosures?

Yes.

Well then, do rich grasses come up on them, now that they are broken up?

Oh no, nothing but groundsel, and a few weeds.

Just what, I dare say, came up here at first. But this land was tilled for corn, for hundreds of years, I believe. And just about one hundred years ago it was laid down in grass: that is, sown with grass seeds.

And where did men get the grass seeds from?

Ah, that is a long story; and one that shows our forefathers (though they knew nothing about railroads or electricity) were not such simpletons as some folks think. The way it must have been done was this. Men watched the natural pastures where cattle get fat on the wild grass, as they do in the fens, and many other parts of England. And then they saved the seeds of those fattening wild grasses, and sowed them in fresh spots. Often they made mistakes. They were careless, and got weeds among the seed—like the buttercups, which do so much harm to this pasture. Or they sowed on soil which would not suit the seed, and it died. But at last after many failures, they have grown so careful and so clever, that you may send to certain shops, saying what sort of soil yours is, and they will send you just the seeds which will grow there, and no other; and then you have a good pasture for as long as you choose to keep it good.

And how is it kept good?

Look at all those loads of hay, which are being carried off the field. Do you think you can take all that away without putting anything in its place?

Why not?

If I took all the butter out of the churn, what must I do if I want more butter still?

Put more cream in.

So, if I want more grass to grow, I must put on the soil more of what grass is made of.

But the butter don't grow, and the grass does.

What does the grass grow in?

The soil.

Yes. Just as the butter grows in the churn. So you must put fresh grass-stuff continually into the soil, as you put fresh cream into the churn. You have heard the farm men say, "That crop has taken a good deal out of the land"?

Yes.

Then they spoke exact truth. What will that hay turn into by Christmas? Can't you tell? Into milk, of course, which you will drink; and into horseflesh too, which you will use.

Use horseflesh? Not eat it?

No; we have not got as far as that. We did not even make up our minds to taste the Cambridge donkey. But every time the horse draws the carriage, he uses up so much muscle; and that muscle he must get back again by eating hay and corn: and that hay and corn must be put back again into the land by manure, or there will be all the less for the horse next year. For one cannot eat one's cake and keep it too; and no more can one eat one's grass.

So this field is a truly wonderful place. It is no ugly pile of brick and mortar, with a tall chimney pouring out smoke and evil smells, with unhealthy, haggard people toiling inside. Why do you look surprised?

Because—because nobody ever said it was. You mean a manufactory.

Well, and this hayfield is a manufactory: only, like most of Madam How's workshops, infinitely more beautiful, as well as infinitely more crafty, than any manufactory of man's building. It is beautiful to behold, and healthy to work in; a joy and blessing alike to the eye, and the mind, and the body: and yet it is a manufactory.

But a manufactory of what?

Of milk, of course, and cows, and sheep, and horses; and of your body and mine—for we shall drink the milk and eat the meat. And therefore it is a flesh and milk manufactory. We must put into it every year yard-stuff,

tank-stuff, guano, bones, and anything and everything of that kind, that Madam How may cook it for us into grass, and cook the grass again into milk and meat. But if we don't give Madam How material to work on, we cannot expect her to work for us. And what do you think will happen then? She will set to work for herself. The rich grasses will dwindle for want of ammonia (that is smelling-salts), and the rich clovers for want of phosphates (that is bone-earth): and in their places will come over the bank the old weeds and grass off the moor, which have not room to get in now, because the ground is covered already. They want no ammonia nor phosphates—at all events they have none, and that is why the cattle on the moor never get fat. So they can live where these rich grasses cannot. And then they will conquer and thrive; and the Field will turn into Wild once more.

Ah, my child, thank God for your forefathers, when you look over that boundary mark. For the difference between the Field and the Wild is the difference between the old England of Madam How's making, and the new England which she has taught man to make, carrying on what she had only begun and had not time to finish.

That moor is a pattern bit left, to show what the greater part of this land was like for long ages after it had risen out of the sea; when there was little or nothing on the flat upper moors save heaths, and ling, and club-mosses, and soft gorse, and needle-whin, and creeping willows; and furze and fern upon the brows; and in the bottoms oak and ash, beech and alder, hazel and mountain ash, holly and thorn, with here an aspen or a buckthorn (berry-bearing alder as you call it), and everywhere where he could thrust down his long root, and thrust up his long shoots, that intruding conqueror and insolent tyrant, the bramble. There were sedges and rushes, too, in the bogs, and coarse grass on the forest pastures—or "leas" as we call them to this day round here—but no real green fields; and, I suspect, very few gay flowers, save in spring the sheets of golden gorse, and in summer the purple heather. Such was old England—or rather, such was this land before it was England; a far sadder, damper, poorer land than now. For one man or one cow or sheep which could have lived on it then, a hundred can live now.

And yet, what it was once, that it might become again,—it surely would round here, if this brave English people died out of it, and the land was left to itself once more.

What would happen then, you may guess for yourself, from what you see happen whenever the land is left to itself, as it is in the wood above. In that wood you can still see in the grass the ridges and furrows which show that it was once ploughed and sown by man ; perhaps as late as the time of Henry the Eighth, when a great deal of poor land, as you will read some day, was thrown out of tillage, to become forest and down once more. And what is the mount now ? A jungle of oak and beech, cherry and holly, young and old all growing up together, with the mountain ash and bramble and furze coming up so fast beneath them, that we have to cut the paths clear again year by year. Why, even the little cow-wheat, a very old-world plant, which only grows in ancient woods, has found its way back again, I know not whence, and covers the open spaces with its pretty yellow and white flowers. Man had conquered this mount, you see, from Madam How, hundreds of years ago. And she always lets man conquer her, because Lady Why wishes man to conquer : only he must have a fair fight with Madam How first, and try his strength against hers to the utmost. So man conquered the wood for a while ; and it became cornfield instead of forest : but he was not strong and wise enough, three hundred years ago, to keep what he had conquered ; and back came Madam How, and took the place into her own hands, and bade the old forest trees and plants come back again—as they would come if they were not stopped year by year, down from the wood, over the pastures—killing the rich grasses as they went, till they met another forest coming up from below, and fought it for many a year, till both made peace, and lived quietly side by side for ages.

Another forest coming up from below ? Where would it come from ?

From where it is now. Come down and look along the brook, and every drain and gripe which runs into the brook. What is here ?

Seedling alders, and some withies among them.

Very well. You know how we pull these alders up,

and cut them down, and yet they continually come again. Now, if we and all human beings were to leave this pasture for a few hundred years would not those alders increase into a wood? Would they not kill the grass, and spread right and left, seeding themselves more and more as the grass died, and left the ground bare, till they met the oaks and beeches coming down the hill? And then would begin a great fight, for years and years, between oak and beech against alder and willow.

But how can trees fight? Could they move, or beat each other with their boughs?

Not quite that; though they do beat each other with their boughs, fiercely enough, in a gale of wind; and then the trees who have strong and stiff boughs wound those who have brittle and limp boughs, and so hurt them and, if the storms come often enough, kill them. But among these trees in a sheltered valley the larger and stronger would kill the weaker and smaller simply by overshadowing their tops, and starving their roots; starving them, indeed, so much when they grow very thick, that the poor little acorns, and beech mast, and alder seeds would not be able to sprout at all. So they would fight, killing each other's children, till the war ended—I think I can guess how.

How?

The beeches are as dainty as they are beautiful; and they do not like to get their feet wet. So they would venture down the hill only as far as the dry ground lasts, and those who tried to grow any lower would die. But the oaks are hardy, and do not care much where they grow. So they would fight their way down into the wet ground among the alders and willows, till they came to where their enemies were so thick and tall, that the acorns as they fell could not sprout in the darkness. And so you would have at last, along the hill-side a forest of beech and oak, lower down a forest of oak and alder, and along the stream-side alders and willows only. And that would be a very fair example of the great law of the struggle for existence, which causes the competition of species.

What is that?

Madam How is very stern, though she is always per-

fectly just ; and therefore she makes every living thing fight for its life, and earn its bread, from its birth till its death ; and rewards it exactly according to its deserts, and neither more nor less.

And the competition of species means, that each thing, and kind of things, has to compete against the things round it, and to see which is the stronger ; and the stronger live, and breed, and spread, and the weaker die out.

But that is very hard.

I know it, my child, I know it. But so it is. And Madam How, no doubt, would be often very clumsy and very cruel, without meaning it, because she never sees beyond her own nose, or thinks at all about the consequences of what she is doing. But Lady Why, who does think about consequences, is her mistress, and orders her about forever. And Lady Why is, I believe, as loving as she is wise, and therefore we must trust that she guides this great war between living things, and takes care that Madam How kills nothing which ought not to die, and takes nothing away without putting something more beautiful and something more useful in its place ; and that even if England were, which God forbid, overrun once more with forests and bramblebrakes, that too would be of use somehow, somewhere, somewhen, in the long ages which are to come hereafter.

And you must remember too, that since men came into the world with rational heads on their shoulders, Lady Why has been handing over more and more of Madam How's work to them, and some of her own work too ; and bids them to put beautiful and useful things in the place of ugly and useless ones ; so that now it is men's own fault if they do not use their wits, and do by all the world what they have done by these pastures—change it from a barren moor into a rich hayfield, by copying the laws of Madam How, and making grass compete against heath. But you look thoughtful : what is it you want to know ?

Why, you say all living things must fight and scramble for what they can get from each other ; and must not I too ? For I am a living thing.

Ah, that is the old question, which our Lord answered

long ago, and said, "Be not anxious what ye shall eat or what ye shall drink, or wherewithal you shall be clothed. For after all these things do the heathen seek, and your heavenly Father knoweth that ye have need of these things. But seek ye first the kingdom of God and His righteousness, and all these things shall be added unto you." A few, very few, people have taken that advice. But they have been just the salt of the earth, which has kept mankind from decaying.

But what has that to do with it?

See. You are a living thing, you say. Are you a plant?

No.

Are you an animal?

I do not know. Yes. I suppose I am. I eat, and drink, and sleep, just as dogs and cats do.

Yes. There is no denying that. No one knew that better than St. Paul, when he told men that they had a flesh; that is, a body, and an animal's nature in them. But St. Paul told them—of course he was not the first to say so, for all the wise heathens have known that—that there was something more in us, which he called a spirit. Some call it now the moral sentiment, some one thing, some another, but we will keep to the old word: we shall not find a better.

Yes, I know that I have a spirit, a soul.

Better to say that you are a spirit. But what does St. Paul say? That our spirit is to conquer our flesh, and keep it down. That the man in us, in short, which is made in the likeness of God, is to conquer the animal in us, which is made in the likeness of the dog and the cat, and sometimes (I fear) in the likeness of the ape or the pig. You would not wish to be like a cat, much less like an ape or a pig?

Of course not.

Then do not copy them, by competing and struggling for existence against other people.

What do you mean?

Did you never watch the pigs feeding?

Yes, and how they grudge and quarrel, and shove each other's noses out of the trough, and even bite, each other because they are so jealous which shall get most.

That is it. And how the biggest pig drives the others away, and would starve them while he got fat, if the man did not drive him off in his turn.

Oh yes ; I know.

Then no wiser than those pigs are worldly men who compete, and grudge, and struggle with each other, which shall get most money, most fame, most power over their fellow-men. They will tell you, my child, that that is the true philosophy, and the true wisdom ; that competition is the natural law of society, and the source of wealth and prosperity. Do not you listen to them. That is the wisdom of this world, which the flesh teaches the animals ; and those who follow it, like the animals, will perish. Such men are not even as wise as Sweep the retriever.

Not as wise as Sweep ?

Not they. Sweep will not take away Victor's bone, though he is ten times as big as Victor, and could kill him in a moment ; and when he catches a rabbit, does he eat it himself ?

Of course not, he brings it and lays it down at our feet.

Because he likes better to do his duty, and be praised for it, than to eat the rabbit, dearly as he longs to eat it.

But he is only an animal. Who taught him to be generous, and dutiful, and faithful ?

Who, indeed ? Not we, you know that, for he has grown up with us since a puppy. How he learnt it, and his parents before him, is a mystery, of which we can only say, God has taught them, we know not how. But see what has happened—that just because dogs have learnt not to be selfish and to compete—that is, have become civilized and tame—therefore, we let them live with us, and love them. Because they try to be good in their simple way, therefore they too have all things added to them, and live far happier and more comfortable lives than the selfish wolf and fox.

But why have not all animals found out that ?

I cannot tell : there may be wise animals and foolish animals, as there are wise and foolish men. Indeed there are. I see a very wise animal there, who never competes ; for she has learnt something of the golden lesson—that it is more blessed to give than to receive ; and she acts on what she has learnt, all day long.

Which do you mean? Why, that is a bee.

Yes, it is a bee: and I wish I were as worthy in my place as that bee is in hers. I wish I could act up as well as she does to the true wisdom, which is self-sacrifice. For whom is that bee working? For herself? If that was all, she only needs to suck the honey as she goes. But she is storing up the wax under her stomach, and bee-bread in her thighs—for whom? Not for herself only, or even for her own children: but for the children of another bee, her queen. For them she labors all day long, builds for them, feeds them, nurses them, spends her love and cunning on them. So does that ant on the path. She is carrying home that stick to build for other ants' children. So do the white ants in the tropics. They have learnt not to compete, but to help each other; not to be selfish, but to sacrifice themselves; and therefore they are strong.

But you told me once that ants would fight and plunder each other's nests. And once we saw two hives of bees fighting in the air, and falling dead by dozens.

My child, do not men fight, and kill each other by thousands with sharp shot and cold steel, because, though they have learnt the virtue of patriotism, they have not yet learnt that of humanity? We must not blame the bees and ants if they are no wiser than men. At least they are wise enough to stand up for their country, that is, their hive, and work for it, and die for it, if need be; and that makes them strong.

But how does that make them strong?

How, is a deep question, and one I can hardly answer yet. But that it has made them so there is no doubt. Look at the solitary bees—the governors as we call them, who live in pairs, in little holes in the banks. How few of them there are; and they never seem to increase in numbers. Then look at the hive-bees, how just because they are civilized,—that is, because they help each other, and feed each other, instead of being solitary and selfish,—they breed so fast, and get so much food, that if they were not killed for their honey, they would soon become a nuisance, and drive us out of the parish.

But then we give them their hives ready made.

True. But in old forest countries, where trees decay and grow hollow, the bees breed in them.

Yes. I remember the bee-tree in the fir-avenue.

Well then, in many forests in hot countries the bees swarm in hollow trees ; and they, and the ants, and the white ants, have it all their own way, and are lords and masters, driving the very wild beasts before them, while the ants and white ants eat up all gardens, and plantations, and clothes, and furniture ; till it is a serious question whether in some hot countries man will ever be able to settle, so strong have the ants grown, by ages of civilization, and not competing against their brothers and sisters.

But may I not compete for prizes against the other boys ?

Well, there is no harm in that ; for you do not harm the others, even if you win. They will have learnt all the more, while trying for the prize ; and so will you, even if you don't get it. But I tell you fairly, trying for prizes is only fit for a child ; and when you become a man, you must put away childish things—competition among the rest.

But surely I may try to be better and wiser and more learned than everybody else ?

My dearest child, why try for that ? Try to be as good, and wise, and learned as you can ; and if you find any man, or ten thousand men, superior to you, thank God for it. Do you think that there can be too much wisdom in the world ?

Of course not : but I should like to be the wisest man in it.

Then you would only have the heaviest burden of all men on your shoulders.

Why ?

Because you would be responsible for more foolish people than any one else. Remember what wise old Moses said, when some one came and told him that certain men in the camp were prophesying—"Would God all the Lord's people did prophesy !" Yes ; it would have saved Moses many a heartache, and many a sleepless night, if all the Jews had been wise as he was, and wiser still. So do not you compete with good and wise men, but simply copy them : and whatever you do, do not

compete with the wolves, and the apes, and the swine of this world ; for that is a game at which you are sure to be beaten.

Why?

Because Lady Why, if she loves you (as I trust she does), will take care that you are beaten, lest you should fancy that it was really profitable to live like a cunninger sort of animal, and not like a true man. And how she will do that I can tell you. She will take care that you always come across a worse man than you are trying to be,—a more apish man, who can tumble and play monkey-tricks for people's amusement better than you can ; or a more swinish man, who can get at more of the pig's-wash than you can ; or a more wolfish man, who will eat you up if you do not get out of his way ; and so she will disappoint and disgust you, my child, with that greedy, selfish, vair animal life, till you turn round and see your mistake, and try to live the true human life, which also is divine ;—to be just and honorable, gentle and forgiving, generous and useful—in one word, to fear God, and keep His commandments : and as you live that life, you will find that, by the eternal laws of Lady Why, all other things will be added to you ; that people will be glad to know you, glad to help you, glad to employ you, because they see that you will be of use to them, and will do them no harm. And if you meet (as you will meet) with people better and wiser than yourself, then so much the better for you ; for they will love you, and be glad to teach you, when they see that you are living the unselfish and harmless life ; and that you come to them, not as foolish Critias came to Socrates, to learn political cunning, and become a selfish and ambitious tyrant, but as wise Plato came, that he might learn the laws of Lady Why, and love them for her sake, and teach them to all mankind. And so you, like the plants and animals, will get your deserts exactly, without competing and struggling for existence as they do.

And all this has come out of looking at the hayfield and the wild moor.

Why not? There is an animal in you, and there is a man in you. If the animal gets the upper hand, all your character will fall back into wild useless moor ; if the

man gets the upper hand, all your character will be cultivated into rich and fertile field. Choose.

Now come down home. The haymakers are resting under the hedge. The horses are dawdling home to the farm. The sun is getting low, and the shadows long. Come home, and go to bed while the house is fragrant with the smell of hay, and dream that you are still play-among the haystacks. When you grow old, you will have other and sadder dreams.

CHAPTER XI.

THE WORLD'S END.

HULLO! hi! wake up. Jump out of bed, and come to the window, and see where you are.

What a wonderful place!

So it is: though it is only poor old Ireland. Don't you recollect that when we started I told you we were going to Ireland, and through it to the World's End; and here we are now safe at the end of the old world, and beyond us the great Atlantic, and beyond that again, thousands of miles away, the new world, which will be rich and prosperous, civilized and noble, thousands of years hence, when this old world, it may be, will be dead, and little children there will be reading in their history books of Ancient England and of Ancient France, as you now read of Greece and Rome.

But what a wonderful place it is! What are those great green things standing up in the sky, all over purple ribs and bars, with their tops hid in the clouds?

Those are mountains; the bones of some old world, whose poor bare sides Madam How is trying to cover with rich green grass.

And how far off are they? How I should like to walk up to the top of that one which looks quite close.

You would find it a long walk up there; three miles, I dare say, over black bogs and banks of rock, and up corries and cliffs which you could not climb. There are plenty of cows on that mountain: and yet they look so

small you could not see them, nor I either, without a glass. That long white streak, zigzagging down the mountain side, is a roaring cataract of foam five hundred feet high, full now with last night's rain : but by this afternoon it will have dwindled to a little thread ; and to-morrow, when you get up, if no more rain has come down, it will be gone. Madam How works here among the mountains swiftly and hugely, and sometimes terribly enough ; as you shall see when you have had your breakfast, and come down to the bridge with me.

But what a beautiful place it is ! Flowers, and woods, and a lawn ; and what is that great smooth patch in the lawn just under the window ? Is it an empty flower-bed ?

Ah, thereby hangs a strange tale. We will go and look at it after breakfast, and then you shall see with your own eyes one of the wonders which I have been telling you of.

And what is that shining between the trees ?

Water.

Is it a lake ?

Not a lake, though there are plenty round here : that is salt water, not fresh. Look away to the right, and you see it through the opening of the woods again and again : and now look above the woods. You see a faint blue line, and gray and purple lumps like clouds, which rest upon it far away. That, child, is the great Atlantic Ocean, and those are islands in the far west. The water which washes the bottom of the lawn was but a few months ago pouring out of the Gulf of Mexico, between the Bahamas and Florida, and swept away here as the great ocean river of warm water which we call the Gulf Stream, bringing with it out of the open ocean the shoals of mackerel, and the porpoises and whales which feed upon them. Some fine afternoon we will run down the bay and catch strange fishes, such as you never saw before, and very likely see a living whale.

What ! such a whale as they get whalebone from, and which eats sea-moths ?

No, they live far north, in the Arctic circle ; these are grampuses, and bottle-noses, which feed on fish ; not so big as the right whales, but quite big enough to astonish

you, if one comes up and blows close to the boat. Get yourself dressed and come down, and then we will go out; we shall have plenty to see and talk of at every step.

Now you have finished your breakfast at last, so come along, and we shall see what we shall see. First run out across the gravel, and scramble up that bank of lawn, and you will see what you fancied was an empty flower-bed.

Why, it is all hard rock.

Ah, you are come into the land of rocks now; out of the land of sand and gravel; out of a soft young corner of the world into a very hard, old, weatherbeaten corner; and you will see rocks enough, and too many for the poor farmers, before you go home again.

But how beautifully smooth and flat the rock is; and yet it is all rounded.

What is it like?

Like—like the half of a shell.

Not badly said, but think again.

Like—like—I know what it is like. Like the back of some great monster peeping up through the turf.

You have got it. Such rocks as these are called in Switzerland "*rochers moutonnés*," because they are, people fancy, like sheep's backs. Now look at the cracks and layers in it. They run across the stone; they have nothing to do with the shape of it. You see that?

Yes: but here are cracks running across them, all along the stone, till the turf hides them.

Look at them again; they are no cracks; they do not go into the stone.

I see. They are scratched; something like those on the elder-stem at home, where the cats sharpen their claws. But it would take a big cat to make them.

Do you recollect what I told you of Madam How's hand, more flexible than any hand of man, and yet strong enough to grind the mountains into paste?

I know. Ice! ice! ice! But are these really ice-marks?

Child, on the place where we now stand, over rich lawns, and warm woods, and shining lochs, lay once on a time hundreds, it may be thousands, of feet of solid ice, crawling off yonder mountain-tops into the ocean there

outside ; and this is one of its tracks. See how the scratches all point straight down the valley, and straight out to sea. Those mountains are 2,000 feet high : but they were much higher once ; for the ice has planed the tops off them. Then, it seems to me, the ice sank, and left the mountains standing out of it about half their height, and at that level it stayed, till it had planed down all those lower moors of smooth bare rock between us and the Western ocean ; and then it sank again, and dwindled back, leaving moraines (that is, heaps of dirt and stones) all up these valleys here and there, till at the last it melted all away, and poor old Ireland became fit to live in again. We will go down the bay some day and look at those moraines, some of them quite hills of earth, and then you will see for yourself how mighty a chisel the ice-chisel was, and what vast heaps of chips it has left behind. Now then, down over the lawn towards the bridge. Listen to the river, louder and louder every step we take.

What a roar ! Is there a waterfall there ?

No. It is only the flood. And underneath the roar of that flood, do you not hear a deeper note—a dull rumbling, as if from underground ?

Yes. What is it ?

The rolling of great stones under water, which are being polished against each other, as they hurry toward the sea. Now, up on the parapet of the bridge. I will hold you tight. Look and see Madam How's rain-spade at work. Look at the terrible yellow torrent below us, almost filling up the arches of the bridge, and leaping high in waves and crests of foam.

Oh, the bridge is falling into the water !

Not a bit. You are not accustomed to see water running below you at ten miles an hour. Never mind that feeling. It will go off in a few seconds. Look ; the water is full six feet up the trunks of the trees ; over the grass and the king fern, and the tall purple loose-strife—

Oh ! Here comes a tree dancing down !

And there are some turfs which have been cut on the mountain. And there is a really sad sight. Look what comes now.

One—two—three. Why, they are sheep.

Yes. And a sad loss they will be to some poor fellow in the glen above.

And oh ! Look at the pig turning round and round solemnly in the corner under the rock. Poor piggy ! He ought to have been at home safe in his sty, and not wandering about the hills. And what are these coming now ?

Butter firkins, I think. Yes. This is a great flood. It is well if there are no lives lost.

But is it not cruel of Madam How to make such floods ?

Well—let us ask one of these men who are looking over the bridge.

Why, what does he say ? I cannot understand one word. Is he talking Irish ?

Irish-English at least : but what he said was, that it was a mighty fine flood entirely, praised be God ; and would help on the potatoes and oats after the drought, and set the grass growing again on the mountains.

And what is he saying now ?

That the river will be full of salmon and white trout after this.

What does he mean ?

That under our feet now, if we could see through the muddy water, dozens of salmon and sea-trout are running up from the sea.

What ! up this furious stream ?

Yes. What would be death to you is pleasure and play to them. Up they are going, to spawn in the little brooks among the mountains ; and all of them are the best of food, fattened on the herrings and sprats in the sea outside, Madam How's free gift, which does not cost man a farthing, save the expense of nets and rods to catch them.

How can that be ?

I will give you a bit of political economy. Suppose a pound of salmon is worth a shilling ; and a pound of beef is worth a shilling likewise. Before we can eat the beef, it has cost perhaps tenpence to make that pound of beef out of turnips and grass and oil-cake ; and so the country is only twopence a pound richer for it. But Mr Salmon has made himself out of what he eats in the sea, and so has cost nothing ; and the shilling a pound is all clear gain. There—you don't quite understand that piece of

political economy. Indeed, it is only in the last two or three years that older heads than yours have got to understand it, and have passed the wise new salmon laws, by which the rivers will be once more as rich with food as the land is, just as they were hundreds of years ago. But now, look again at the river. What do you think makes it so yellow and muddy?

Dirt of course.

And where does that come from?

Off the mountains?

Yes. Tons and tons of white mud are being carried down past us now; and where will they go?

Into the sea?

Yes, and sink there in the still water, to make new strata at the bottom; and perhaps in them, ages hence, some one will find the bones of those sheep, and of poor Mr. Pig too, fossil——

And the butter firkins too. What fun to find a fossil butter firkin!

But now lift up your eyes to the jagged mountain crests, and their dark sides all laced with silver streams. Out of every crack and cranny there aloft, the rain is bringing down dirt, and stones too, which have been split off by the winter's frosts, deepening every little hollow, and sharpening every peak, and making the hills more jagged and steep year by year.

When the ice went away, the hills were all scraped smooth and round by the glaciers, like the flat rock upon the lawn; and ugly enough they must have looked, most like great brown buns. But ever since then, Madam How has been scooping them out again by her water-chisel into deep glens, mighty cliffs, sharp peaks, such as you see aloft, and making the old hills beautiful once more. Why, even the Alps in Switzerland have been carved out by frost and rain, out of some great flat. The very peak of the Matterhorn, of which you have so often seen pictures, is but one single point left of some enormous bun of rock. All the rest has been carved away by rain and frost; and some day the Matterhorn itself will be carved away, and its last stone topple into the glacier at its foot. See, as we have been talking, we have got into the woods.

Oh what beautiful woods, just like our own !

Not quite. There are some things growing here which do not grow at home, as you will soon see. And there are no rocks at home either, as there are here.

How strange, to see trees growing out of rocks ! How do their roots get into the stone ?

There is plenty of rich mould in the cracks for them to feed on—

“Health to the oak of the mountain ; he trusts to the might of the
rock-clefts.

Deeply he mines, and in peace feeds on the wealth of the stone.”

How many sorts of trees there are—oak, and birch, and nuts, and mountain-ash, and holly and furze, and heather.

And if you went to some of the islands in the lake up in the glen, you would find wild arbutus—strawberry-tree, as you call it. We will go and get some one day or other.

How long and green the grass is, even on the rocks ; and the ferns, and the moss too. Everything seems richer here than at home.

Of course it is. You are here in the land of perpetual spring, where frost and snow seldom or never comes.

Oh, look at the ferns under this rock ! I must pick some.

Pick away. I will warrant you do not pick all the sorts.

Yes. I have got them all now.

Not so hasty, child ; there is plenty of a beautiful fern growing among that moss, which you have passed over. Look here.

What ! that little thing a fern ?

Hold it up to the light, and see.

What a lovely little thing, like a transparent seaweed, hung on black wire ! What is it ?

Film fern, *Hymenophyllum*. But what are you staring at now, with all your eyes ?

Oh ! that rock covered with green stars and a cloud of little white and pink flowers growing out of them.

Aha ! my good little dog ! I thought you would stand to that game when you found it.

What is it, though ?

You must answer that yourself. You have seen it a hundred times before.

Why, it is London Pride, that grows in the garden at home.

Of course it is : but the Irish call it St. Patrick's cabbage ; though it got here a long time before St. Patrick ; and St. Patrick must have been very short of garden-stuff if he ever ate it.

But how did it get here from London ?

No, no. How did it get to London from hence ? For from this country it came. I suppose the English brought it home in Queen Bess's or James the First's time.

But if it is wild here, and will grow so well in England, why do we not find it wild in England too ?

For the same reason that there are no toads or snakes in Ireland. They had not got as far as Ireland before Ireland was parted off from England. And St. Patrick's cabbage, and a good many other plants, have not got as far as England.

But why ?

Why, I don't know. But this I know : that when Madam How makes a new sort of plant or animal, she starts it in one single place, and leaves it to take care of itself, and earn its own living—as she does you and me and every one—and spread from that place all round as far as it can go. So St. Patrick's cabbage got into this southwest of Ireland, long, long ago ; and was such a brave sturdy little plant, that it clambered up to the top of the highest mountains, and over all the rocks. But when it got to the rich lowlands to the eastward, in county Cork, it found all the ground taken up already with other plants ; and as they had enough to do to live themselves, they would not let St. Patrick's cabbage settle among them ; and it had to be content with living here in the far west—and, what was very sad, had no means of sending word to its brothers and sisters in the Pyrenees how it was getting on.

What do you mean ? Are you making fun of me ?

Not the least. I am only telling you a very strange story, which is literally true. Come and sit down on this bench. You can't catch that great butterfly ; he is too strong on the wing for you.

But oh, what a beautiful one !

Yes, orange and black, silver and green, a glorious creature. But you may see him at home sometimes : that plant close to you, you cannot see at home.

Why, it is only a great spurge, such as grows in the woods at home.

No. It is Irish spurge, which grows here, and sometimes in Devonshire, and then again in the west of Europe, down to the Pyrenees. Don't touch it. Our wood spurge is poisonous enough, but this is worse still ; if you get a drop of its milk on your lip or eye, you will be in agonies for half a day. That is the evil plant with which the poachers kill the salmon.

How do they do that ?

When the salmon are spawning up in the little brooks, and the water is low, they take that spurge, and grind it between two stones under water, and let the milk run down into the pool ; and at that all the poor salmon turn up dead. Then comes the water-bailiff, and catches the poachers. Then comes the policeman, with his sword at his side and his truncheon under his arm : and then comes a "cheap journey" to Tralee Jail, in which those foolish poachers sit and reconsider themselves, and determine not to break the salmon laws—at least till next time.

But why is it that this spurge, and St. Patrick's cabbage, grow only here in the west ? If they got here of themselves, where did they come from ? All outside there is sea ; and they could not float over that.

Come, I say, and sit down on this bench, and I will tell you a tale,—the story of the Old Atlantis, the sunken land in the far West. Old Plato the Greek told legends of it, which you will read some day ; and now it seems as if those old legends had some truth in them, after all. We are standing now on one of the last remaining scraps of the old Atlantic land. Look down the bay. Do you see far away, under the mountains, little islands, long and low ?

Oh yes.

Some of those are old slate, like the mountains ; others are limestone ; bits of the old coral-reef to the west of Ireland which became dry land.

I know. You told me about it.

Then that land, which is all eaten up by the waves now, once joined Ireland to Cornwall, and to Spain, and to the Azores, and I suspect to the Cape of Good Hope, and, what is stranger, to Labrador, on the coast of North America.

Oh! How can you know that?

Listen, and I will give you your first lesson in what I call Bio-geology.

What a long word!

If you can find a shorter one, I shall be very much obliged to you, for I hate long words. But what it means is,—Telling how the land has changed in shape, by the plants and animals upon it. And if you ever read (as you will) Mr. Wallace's new book on the Indian Archipelago, you will see what wonderful discoveries men may make about such questions, if they will but use their common sense. You know the common pink heather, ling as we call it?

Of course.

Then that ling grows, not only here and in the north and west of Europe, but in the Azores too; and, what is more strange, in Labrador. Now, as ling can neither swim nor fly, does not common sense tell you that all those countries were probably joined together in old times?

Well: but it seems so strange.

So it is, my child; and so is everything. But, as the fool says in Shakespeare—

“A long time ago the world began,
With heigh ho, the wind and the rain.”

And the wind and the rain have made strange work with the poor old world ever since. And that is about all that we, who are not so very much wiser than Shakespeare's fool, can say about the matter. But again—the London Pride grows here, and so does another saxifrage very like it, which we call *Saxifraga Geum*. Now, when I saw those two plants growing in the Western Pyrenees, between France and Spain, and with them the beautiful blue butterwort, which grows in these Kerry bogs—we

will go and find some—what could I say but that Spain and Ireland must have been joined once?

I suppose it must be so.

Again. There is a little pink butterwort here in the bogs, which grows, too, in dear old Devonshire and Cornwall; and also in the south-west of Scotland. Now, when I found that too, in the bogs near Biarritz, close to the Pyrenees, and knew that it stretched away along the Spanish coast, and into Portugal, what could my common sense lead me say but that Scotland, and Ireland and Cornwall, and Spain were all joined once? Those are only a few examples. I could give you a dozen more. For instance, on an island away there to the west, and only in one spot, there grows a little sort of lily, which is found I believe in Brittany, and on the Spanish and Portuguese heaths, and even in North-west Africa. And that Africa and Spain were joined not so very long ago at the Straits of Gibraltar, there is no doubt at all.

But where did the Mediterranean Sea run out then?

Perhaps it did not run out at all; but was a salt-water lake, like the Caspian, or the Dead Sea. Perhaps it ran out over what is now the Sahara, the great desert of sand, for that was a sea-bottom not long ago.

But then, how was this land of Atlantis joined to the Cape of Good Hope?

I cannot say how, or when either. But this is plain: the place in the world where the most beautiful heaths grow is the Cape of Good Hope? You know I showed you Cape heaths once at the nursery gardener's at home.

Oh yes, pink, and yellow, and white; so much larger than ours.

Then it seems (I only say it seems) as if there must have been some land once to the westward, from which the different sorts of heath spread south-eastward to the Cape, and north-eastward into Europe. And that they came north-eastward into Europe seems certain; for there are no heaths in America or Asia.

But how north-eastward?

Think. Stand with your face to the south and think. If a thing comes from the south-west—from there, it must go to the north-east—towards there. Must it not?

Oh yes, I see.

Now then—— The further you go south-west, towards Spain, the more kinds of heath there are, and the handsomer ; as if their original home, from which they started, was somewhere down there.

More sorts ! What sorts ?

How many sorts of heath have we at home ?

Three, of course : ling, and purple heath, and bottle heath.

And there are no more in all England, or Wales, or Scotland, except—— Now, listen. In the very farthest end of Cornwall there are two more sorts, the Cornish heath and the Orange-bell ; and they say (though I never saw it) that the Orange-bell grows near Bournemouth.

Well. That is south and west too.

So it is : but that makes five heaths. Now in the south and west of Ireland all these five heaths grow, and two more ; the great Irish heath, with purple bells, and the Mediterranean heath, which flowers in spring.

Oh, I know them. They grow in the Rhododendron beds at home.

Of course. Now again. If you went down to Spain, you would find all those seven heaths, and other sorts with them ; and those which are rare in England and Ireland are common there. About Biarritz, on the Spanish frontier, all the moors are covered with Cornish heath, and the bogs with Orange-bell, and lovely they are to see ; and growing among them is a tall heath six feet high, which they call there *bruyère*, or Broom-heath, because they make brooms of it : and out of its roots the “brier-root” pipes are made. There are other heaths about that country, too, whose names I do not know ; so that when you are there, you fancy yourself in the very home of the heaths : but you are not. They must have come from some land near where the Azores are now ; or how could heaths have got past Africa, and the tropics, to the Cape of Good Hope ?

It seems very wonderful, to be able to find out that there was a great land once in the ocean all by a few little heaths.

Not by them only, child. There are many other plants, and animals too, which make one think that so it must have been. And now I will tell you something stranger

still. There may have been a time—some people say that there must—when Africa and South America were joined by land.

Africa and South America! Was that before the heaths came here, or after?

I cannot tell: but I think, probably after. But this is certain, that there must have been a time when figs, and bamboos, and palms, and sarsaparillas, and many other sorts of plants could get from Africa to America, or the other way, and indeed almost round the world. About the South of France and Italy you will see one beautiful sarsaparilla, with hooked prickles, zigzagging and twining about over rocks and ruins, trunks and stems: and when you do, if you have understanding, it will seem as strange to you as it did to me to remember that the home of the sarsaparillas is not in Europe, but in the forests of Brazil, and the River Plate.

Oh, I have heard about their growing there, and staining the rivers brown, and making them good medicine to drink: but I never thought there were any in Europe.

There are only one or two, and how they got here is a marvel indeed. But now—— If there was not dry land between Africa and South America, how did the cats get into America? For they cannot swim.

Cats? People might have brought them over.

Jaguars and Pumas, which you read of in Captain Mayne Reid's books, are cats, and so are the Ocelots or tiger cats.

Oh, I saw them at the Zoological Gardens.

But no one would bring them over I should think, except to put them in the Zoo.

Not unless they were very foolish.

And much stronger and cleverer than the savages of South America. No, those jaguars and pumas have been in America for ages: and there are those who will tell you—and I think they have some reason on their side—that the jaguar, with his round patches of spots, was once very much the same as the African and Indian leopard, who can climb trees well. So when he got into the tropic forests of America, he took to the trees, and lived among the branches, feeding on sloths and monkeys, and never coming to the ground for weeks, till he grew fatter and

stronger and far more terrible than his forefathers. And they will tell you, too, that the puma was, perhaps—I only say perhaps—something like the lion, who (you know) has no spots. But when he got into the forest, he found very little food under the trees, only a very few deer; and so he was starved, and dwindled down to the poor little sheep-stealing rogue he is now, of whom nobody is afraid.

Oh, yes! I remember now A. said he and his men killed six in one day. But do you think it is all true about the pumas and jaguars?

My child, I don't say that it is true: but only that it is likely to be true. In science we must be cautious and modest, and ready to alter our minds whenever we learn fresh facts; only keeping sure of one thing, that the truth, when we find it out, will be far more wonderful than any notions of ours. See! As we have been talking we have got nearly home: and luncheon must be ready.

* * * * *

Why are you opening your eyes at me, like the dog when he wants to go out walking?

Because I want to go out. But I don't want to go out walking. I want to go in the yacht.

In the yacht? It does not belong to me.

Oh, that is only fun. I know everybody is going out in it to see such a beautiful island full of ferns, and have a picnic on the rocks; and I know you are going.

Then you know more than I do myself.

But I heard them say you were going.

Then they know more than I do myself.

But would you not like to go?

I might like to go very much indeed; but as I have been knocked about at sea a good deal and perhaps more than I intend to be again, it is no novelty to me, and there might be other things which I like still better: for instance, spending the afternoon with you.

Then am I not to go?

I think not. Don't pull such a long face: but be a man, and make up your mind to it, as the geese do to going barefoot.

But why may I not go?

Because I am not Madam How, but your Daddy.

What can that have to do with it?

If you asked Madam How, do you know what she would answer in a moment, as civilly and kindly as could be? She would say—Oh yes, go by all means, and please yourself, my pretty little man. My world is the Paradise which the Irishman talked of, in which “a man might do what was right in the sight of his own eyes, and what was wrong too, av he liked it.”

Then Madam How would let me go in the yacht?

Of course she would, or jump overboard when you were in it; or put your finger in the fire, and your head afterwards; or eat Irish spurge, and die like the salmon; or anything else you liked. Nobody is so indulgent as Madam How; and she would be the dearest old lady in the world, but for one ugly trick that she has. She never tells anyone what is coming, but leaves them to find it out for themselves. She lets them put their fingers in the fire, and never tells that they will get burnt.

But that is very cruel and treacherous of her.

My boy, our business is not to call hard names, but to take things as we find them, as the Highlandman said when he ate the braxy mutton. Now shall I, because I am your Daddy, tell you what Madam How would not have told you? When you get on board the yacht, you will think it all very pleasant for an hour, as long as you are in the bay. But presently you will get a little bored, and run about the deck, and disturb people, and want to sit here, there, and everywhere, which I should not like. And when you get beyond that headland, you will find the great rollers coming in from the Atlantic, and the cutter tossing and heaving as you never felt before, under a burning sun. And then my merry little young gentleman will begin to feel a little sick; and then very sick, and more miserable than he ever felt in his life; and wish a thousand times over that he was safe at home, even doing sums in long division; and he will give a great deal of trouble to various kind ladies—which no one has a right to do, if he can help it.

Of course I do not wish to be sick: only it looks such beautiful weather.

And so it is : but don't fancy that last night's rain and wind can have passed without sending in such a swell as will frighten you, when you see the cutter climbing up one side of a wave, and running down the other ; Madam How tells me that, though she will not tell you yet.

Then why do they go out ?

Because they are accustomed to it. They have come hither all round from Cowes, past the Land's End, and past Cape Clear, and they are not afraid or sick either. But shall I tell you how you would end this evening ?—at least so I suspect. Lying miserable in a stuffy cabin, on a sofa, and not quite sure whether you were dead or alive, till you were bundled into a boat about twelve o'clock at night, when you ought to be safe asleep, and come home cold, and wet, and stupid, and ill, and lie in bed all to-morrow.

But will they be wet and cold ?

I cannot be sure : but from the look of the sky there to westward, I think some of them will be. So do you make up your mind to stay with me. But if it is fine and smooth to-morrow, perhaps we may row down the bay, and see plenty of wonderful things.

But why is it that Madam How will not tell people beforehand what will happen to them, as you have told me ?

Now I will tell you a great secret, which, alas ! everyone has not found out yet. Madam How will teach you, but only by experience. Lady Why will teach you, but by something very different—by something which has been called—and I know no better names for it—grace and inspiration ; by putting into your heart feelings which no man, not even your father and mother, can put there ; by making you quick to love what is right, and hate what is wrong, simply because they are right and wrong, though you don't know why they are right and wrong ; by making you teachable, modest, reverent, ready to believe those who are older and wiser than you when they tell you what you could never find out for yourself : and so you will be prudent, that is provident, foreseeing, and know what will happen if you do so-and-so ; and therefore what is really best and wisest for you.

But why will she be kind enough to do that for me ?

For the very same reason that I do it. For God's sake. Because God is your Father in heaven, as I am your father on earth, and He does not wish His little child to be left to the hard teaching of Nature and Law, but to be helped on by many, many unsought and undeserved favors, such as are rightly called "Means of Grace;" and above all by the Gospel and good news that you are God's child, and that God loves you, and has helped and taught you, and will help you and teach you, in a thousand ways of which you are not aware, if only you will be a wise child, and listen to Lady Why, when she cries from her Palace of Wisdom, and the feast which she has prepared, "Whoso is simple let him turn in hither;" and says to him who wants understanding—"Come, eat of my bread, and drink of the wine which I have mingled."

"Counsel is mine, and sound wisdom: I am understanding; I have strength. By me kings reign, and princes decree justice. By me princes rule, and nobles, even all the judges of the earth. I love them that love me; and those that seek me early shall find me. Riches and honor are with me; yea, durable riches and righteousness."

Yes, I will try and listen to Lady Why: but what will happen if I do not?

That will happen to you, my child—but God forbid it ever should happen—which happens to wicked kings and rulers, and all men, even the greatest and cleverest, if they do not choose to reign by Lady Why's laws, and decree justice according to her eternal ideas of what is just, but only do what seems pleasant and profitable to themselves. On them Lady Why turns round, and says—for she, too, can be awful, ay dreadful, when she needs—

"Because I have called, and ye refused; I have stretched out my hand, and no man regarded; but ye have set at nought all my counsel, and would have none of my reproof—" And then come words so terrible, that I will not speak them here in this happy place: but what they mean is this:—

That these foolish people are handed over—as you and I shall be if we do wrong wilfully—to Madam How and her terrible school-house, which is called Nature and the

Law, to be treated just as the plants and animals are treated, because they did not choose to behave like men and children of God. And there they learn, whether they like or not, what they might have learnt from Lady Why all along. They learn the great law, that as men sow so they will reap ; as they make their bed so they will lie on it : and Madam How can teach that as no one else can in earth or heaven : only, unfortunately for her scholars, she is apt to hit so hard with her rod, which is called Experience, that they never get over it ; and therefore most of those who will only be taught by Nature and Law are killed, poor creatures, before they have learnt their lesson ; as many a savage tribe is destroyed, ay and great and mighty nations too—the old Roman Empire among them.

And the poor Jews, who were carried away captive to Babylon ?

Yes ; they would not listen to Lady Why, and so they were taken in hand by Madam How, and were seventy years in her terrible school-house, learning a lesson which, to do them justice, they never forgot again. But now we will talk of something pleasanter. We will go back to Lady Why, and listen to her voice. It sounds gentle and cheerful enough just now. Listen.

What ! is she speaking to us now ?

Hush ! Open your eyes and ears once more, for you are growing sleepy with my long sermon. Watch the sleepy shining water, and the sleepy green mountains. Listen to the sleepy lapping of the ripple, and the sleepy sighing of the woods, and let Lady Why talk to you through them in “songs without words,” because they are deeper than all words, till you, too, fall asleep with your head upon my knee.

But what does she say ?

She says—“Be still. The fulness of joy is peace.” There, you are fast asleep ; and perhaps that is the best thing for you ; for sleep will (so I am informed, though I never saw it happen, nor anyone else) put fresh gray matter into your brain ; or save the wear and tear of the old gray matter ; or something else—when they have settled what it is to do : and if so, you will wake up with a fresh fiddle-string to your little fiddle of a brain,

on which you are playing new tunes all day long. So much the better : but when I believe that your brain is you, pretty boy, then I shall believe also that the fiddler is his fiddle.

CHAPTER XII.

HOMEWARD BOUND.

COME : I suppose you consider yourself quite a good sailor by now ?

Oh yes. I have never been ill yet, though it has been quite rough again and again.

What you call rough, little man. But as you are grown such a very good sailor, and also as the sea is all but smooth, I think we will have a sail in the yacht to-day, and that a tolerably long one.

Oh, how delightful ! But I thought we were going home ; and the things are all packed up.

And why should we not go homewards in the yacht, things and all ?

What, all the way to England ?

No, not so far as that ; but these kind people, when they came into the harbor last night, offered to take us up the coast to a town, where we will sleep, and start comfortably home to-morrow morning. So now you will have a chance of seeing something of the great sea outside, and of seeing, perhaps, the whale himself.

I hope we shall see the whale. The men say he has been outside the harbor every day this week after the fish.

Very good. Now do you keep quiet, and out of the way, while we are getting ready to go on board ; and take a last look at this pretty place, and all its dear kind people.

And the dear kind dogs too, and the cat and the kittens.

* * * * *

Now, come along, and bundle into the boat, if you have done bidding every one good-bye ; and take care

you don't slip down in the ice-groovings, as you did the other day. There, we are off at last.

Oh, look at them all on the rock watching us and waving their handkerchiefs; and Harper and Paddy too, and little Jimsy and Isy, with their fat bare feet, and their arms round the dog's necks. I am so sorry to leave them all.

Not sorry to go home?

No, but——They have been so kind; and the dogs were so kind. I am sure they knew we were going, and were sorry too.

Perhaps they were. They knew we were going away, at all events. They know what bringing out boxes and luggage means well enough.

Sam knew, I am sure; but he did not care for us. He was only uneasy because he thought Harper was going, and he should lose his shooting; and as soon as he saw Harper was not getting into the boat, he sat down and scratched himself, quite happy. But do dogs think?

Of course they do, only they do not think in words, as we do.

But how can they think without words?

That is very difficult for you and me to imagine, because we always think in words. They must think in pictures, I suppose, by remembering things which have happened to them. You and I do that in our dreams. I suspect that savages, who have very few words to express their thoughts with, think in pictures, like their own dogs. But that is a long story. We must see about getting on board now, and under way.

* * * * *

Well, and what have you been doing?

“Oh, I looked all over the yacht, at the ropes and curious things; and then I looked at the mountains, till I was tired; and then I heard you and a gentleman talking about the land sinking, and I listened. There was no harm in that?

None at all. But what did you hear him say?

That the land must be sinking here, because there were peat-bogs everywhere below high-water mark. Is that true?

Quite true; and that peat would never have been formed where the salt water could get at it, as it does now every tide.

But what was it he said about that cliff over there?

He said that cliff on our right, a hundred feet high, was plainly once joined on to that low island on our left.

What! that long bank of stones, with a house on it?

That is no house. That is a square lump of mud, the last remaining bit of earth which was once the moraine of a glacier. Every year it crumbles into the sea more and more; and in a few years it will be all gone, and nothing left but the great round boulder-stones which the ice brought down from the glaciers behind us.

But how does he know that it was once joined to the cliff?

Because that cliff, and the down behind it, where the cows are fed, is made up, like the island, of nothing but loose earth and stones; and that is why it is bright and green, beside the gray rocks and brown heather of the moors at its foot. He knows that it must be an old glacier moraine; and he has reason to think that moraine once stretched right across the bay to the low island, and perhaps on to the other shore, and was eaten out by the sea as the land sank down.

But how does he know that the land sank?

Of that, he says, he is quite certain; and this is what he says.—Suppose there was a glacier here, where we are sailing now: it would end in an ice cliff, such as you have seen a picture of in Captain Cook's Voyages, of which you are so fond. You recollect the pictures of Christmas Sound and Possession Bay?

Oh yes, and pictures of Greenland and Spitzbergen too, with glaciers in the sea.

Then icebergs would break off from that cliff, and carry all the dirt and stones out to sea, perhaps hundreds of miles away, instead of letting it drop here in a heap; and what did fall in a heap here the sea would wash down at once, and smooth it over the sea-bottom, and never let it pile up in a huge bank like that. Do you understand?

I think I do.

Therefore, he says, that great moraine must have been built upon dry land, in the open air; and must have sunk

since into the sea, which is gnawing at it day and night, and will some day eat it all up, as it would eat up all the dry land in the world, if Madam How was not continually lifting up fresh land, to make up for what the sea has carried off.

Oh, look there ! Some one has caught a fish, and is hauling it up. What a strange creature ! It is not a mackerel, nor a gurnet, nor a pollock.

How do you know that ?

Why, it is running along the top of the water like a snake ; and they never do that. Here it comes. It has got a long beak, like a snipe. Oh, let me see.

See if you like : but don't get in the way. Remember you are but a little boy.

What is it ? a snake with a bird's head ?

No ; a snake has no fins ; and look at his beak ; it is full of little teeth, which no bird has. But a very curious fellow he is, nevertheless ; and his name is Gar-fish. Some call him Green-bone, because his bones are green.

But what kind of fish is he ? He is like nothing I ever saw.

I believe he is nearest to a pike, though his backbone is different from a pike, and from all other known fishes.

But is he not very rare ?

Oh no : he comes to Devonshire and Cornwall with the mackerel, as he has come here : and in calm weather he will swim on the top of the water, and play about, and catch flies, and stand bolt upright with his long nose in the air ; and when the fisherboys throw him a stick, he will jump over it again and again, and play with it in the most ridiculous way.

And what will they do with him ?

Cut him up for bait, I suppose, for he is not very good to eat.

Certainly he does smell very nasty.

Have you only just found out that ? Sometimes when I have caught one, he has made the boat smell so that I was glad to throw him overboard, and so he saved his life by his nastiness. But they will catch plenty of mackerel now ; for where he is they are ; and where they are, perhaps, the whale will be ; for we are now well outside the harbor, and running across the open bay ; and lucky

for you that there are no rollers coming in from the Atlantic, and spouting up those cliffs in columns of white foam

* * * * *

“Hoch!”

Ah! Who was that coughed just behind the ship?

Who indeed? Look round and see.

There is nobody. There could not be in the sea.

Look—there, a quarter of a mile away.

Oh! What is that turning over in the water, like a great black wheel? And a great tooth on it, and—Oh! it is gone!

Never mind. It will soon show itself again.

But what was it?

The whale: one of them at least; for the men say there are two different ones about the bay. That black wheel was part of his back, as he turned down; and the tooth on it was his back-fin.

But the noise, like a giant's cough?

Rather like the blast of a locomotive just starting. That was his breath.

What! as loud as that?

Why not? He is a very big fellow, and has big lungs.

How big is he?

I cannot say; perhaps thirty or forty feet long. We shall be able to see better soon. He will come up again, and very likely nearer us, where those birds are.

I don't want him to come any nearer.

You really need not be afraid. He is quite harmless.

But he might run against the yacht.

He might; and so might a hundred things happen which never do. But I never heard of one of these whales running against a vessel; so I suppose he has sense enough to know that the yacht is no concern of his, and to keep out of its way.

But why does he make that tremendous noise only once, and then go under water again?

You must remember that he is not a fish. A fish takes the water in through his mouth continually, and it runs

over his gills, and out behind through his gill-covers. So the gills suck up the air out of the water and send it into the fish's blood, just as they do in the newt-larva.

Yes, I know.

But the whale breathes with lungs like you and me; and when he goes under water he has to hold his breath, as you and I have.

What a long time he can hold it.

Yes. He is a wonderful diver. Some whales, they say, will keep under for an hour. But while he is under, mind, the air in his lungs is getting foul, and full of carbonic acid, just as it would in your lungs, if you held your breath. So he is forced to come up at last: and then out of his blowers, which are on the top of his head, he blasts out all the foul breath, and with it the water which has got into his mouth, in a cloud of spray. Then he sucks in fresh air, as much as he wants, and dives again, as you saw him do just now.

And what does he do under water?

Look—and you will see. Look at those birds. We will sail up to them; for Mr. Whale will probably rise among them soon.

Oh, what a screaming, and what a fighting! How many sorts there are! What are those beautiful little ones, like great white swallows, with crested heads and forked tails, who hover, and then dip down and pick up something?

Terns—sea-swallows. And there are gulls in hundreds, you see, large and small, gray-backed and black-backed; and over them all two or three great gannets swooping round and round.

Oh! one has fallen into the sea!

Yes, with a splash just like a cannon-ball. And here he comes up again, with a fish in his beak. If he had fallen on your head, with that beak of his, he would have split it open. I have heard of men catching gannets by tying a fish on a board, and letting it float; and when the gannet strikes at it, he drives his bill into the board, and cannot get it out.

But is not that cruel?

I think so. Gannets are of no use, for eating, or anything else.

What a noise ! It is quite deafening. And what are those black birds about, who croak like crows, or parrots ?

Look at them. Some have broad bills, with a white stripe on it, and cry something like the moorhens at home. Those are razor-bills.

And what are those who say "marrock," something like a parrot ?

The ones with thin bills ? They are guillemots, "murres" as we call them in Devon : but in some places they call them "marrocks," from what they say.

And each has a little baby bird swimming behind it. Oh ! there : the mother has cocked up her tail and dived, and the little one is swimming about looking for her ! How it cries ! It is afraid of the yacht.

And there she comes up again, and cries "marrock" to call it.

Look at it swimming up to her, and cuddling to her, quite happy.

Quite happy. And do you not think that anyone who took a gun and shot either that mother or that child would be both cowardly and cruel ?

But they might eat them.

These sea-birds are not good to eat. They taste too strong of fish-oil. They are of no use at all, except that the gulls' and terns' feathers are put into girls' hats.

Well, they might find plenty of other things to put in their hats.

So I think. Yes : it would be very cruel, very cruel indeed, to do what some do, shoot at these poor things, and leave them floating about wounded till they die. But I suppose, if one gave them one's mind about such doings, and threatened to put the new Sea Fowl Act in force against them, and fine them, and show them up in the newspapers, they would say they meant no harm, and had never thought about its being cruel.

Then they ought to think.

They ought ; and so ought you. Half the cruelty in the world, like half the misery, comes simply from people's not thinking ; and boys are often very cruel from mere thoughtlessness. So when you are tempted to rob birds' nests, or to set the dogs on a moorhen, or pelt

wrens in the hedge think ; and say—How should I like that to be done to me?

I know : but what are all the birds doing?

Look at the water, how it sparkles. It is alive with tiny fish, "fry," "brett" as we call them in the West, which the mackerel are driving up to the top.

Poor little things ! How hard on them ! the big fish at them from below, and the birds at them from above. And what is that ? Thousands of fish leaping out of the water, scrambling over each other's backs ! What a curious soft rushing roaring noise they make !

Aha ! The eaters are going to be eaten in turn. Those are the mackerel themselves : and I suspect they see Mr. Whale, and are scrambling out of the way as fast as they can, lest he should swallow them down, a dozen at a time. Look out sharp for him now.

I hope he will not come very near.

No. The fish are going from us and past us. If he comes up, he will come up astern of us, so look back. There he is !

That ? I thought it was a boat.

He does look very like a boat upside down. But that is only his head and shoulders. He will blow next.

"Hoch !"

Oh ! What a jet of spray, like the Geysers ! And the sun made a rainbow on the top of it. He is quite still now.

Yes ; he is taking a long breath or two. You need not hold my hand so tight. His head is from us ; and when he goes down, he will go right away.

Oh, he is turning head over heels ! There is his back fin again. And—— Ah ! was not that a slap ! How the water boiled and formed ; and what a tail he had ! And how the mackerel flew out of the water !

Yes. You are a lucky boy to have seen that. I have not seen one of those gentlemen show his "flukes," as they call them, since I was a boy on the Cornish coast.

Where is he gone?

Hunting mackerel, away out at sea. But did you notice something odd about his tail, as you call it—though it is really none?

It looked as if it was set on flat, and not upright, like a fish's. But why is it not a tail?

Just because it is set on flat, not upright : and learned men will tell you that those two flukes are the "rudiments"—that is, either the beginning, or more likely the last remains—of two hind feet. But that belongs to the second volume of Madam How's Book of Kind ; and you have not yet learned any of the first volume, you know, except about a few butterflies. Look here ! Here are more whales coming. Don't be frightened. They are only little ones, mackerel-hunting, like the big one.

What pretty smooth things, turning head over heels, and saying, "Hush, Hush !"

They don't really turn clean over ; and that "Hush" is their way of breathing.

Are they the young ones of that great monster?

No ; they are porpoises. That big one is, I believe, a bottle-nose. But if you want to know about the kinds of whales, you must ask Dr. Flower at the Royal College of Surgeons, and not me : and he will tell you wonderful things about them.—How some of them have mouths full of strong teeth, like these porpoises ; and others, like the great sperm whale in the South Sea, have huge teeth in their lower jaws, and in the upper only holes into which those teeth fit ; others, like the bottle-nose, only two teeth or so in the lower jaw ; and others, like the narwhal, two straight tusks in the upper jaw, only one of which grows, and is what you call a narwhal's horn.

Oh yes. I know of a walking-stick made of one.

And, strangest of all, how the right whales have a few little teeth when they are born, which never come through the gums ; but, instead, they grow along their gums, an enormous curtain of clotted hair, which serves as a net to keep in the tiny sea-animals on which they feed, and let the water strain out.

You mean whalebone ? Is whalebone hair ?

So it seems. And so is a rhinoceros's horn. A rhinoceros used to be hairy all over in old times : but now he carries all his hair on the end of his nose, except a few bristles on his tail. And the right whale, not to be done in oddity, carries all his on his gums.

But have no whales any hair ?

No real whales : but the manati, which is very nearly a whale, has long, bristly hair left. Don't you remember M.'s letter about the one he saw at Rio Janeiro ?

This is all very funny : but what is the use of knowing so much about things' teeth and hair?

What is the use of learning Latin and Greek, and a dozen things more which you have to learn? You don't know yet: but wiser people than you tell you that they will be of use some day. And I can tell you, that if you would only study that gar-fish long enough, and compare him with another fish something like him, who has a long beak to his lower jaw, and none to his upper—and how he eats, I cannot guess,—and both of them again with certain fishes like them, which M. Agassiz has found lately, not in the sea, but in the river Amazon; and then think carefully enough over their bones and teeth, and their history from the time they are hatched—why, you would find out, I believe, a story about the river Amazon itself, more wonderful than all the fairy tales you ever read.

Now there is luncheon ready. Come down below, and don't tumble down the companion-stairs; and by the time you have eaten your dinner we shall be very near the shore.

* * * * *

So! Here is my little man on deck, after a good night's rest. And he has not been the least sick, I hear.

Not a bit: but the cabin was so stuffy and hot, I asked leave to come on deck. What a huge steamer! But I do not not like it as well as the yacht. It smells of oil and steam, and——

And pigs and bullocks too, I am sorry to say. Don't go forward above then, but stay here with me, and look round.

Where are we now? What are those high hills, far away to the left, above the lowlands and woods?

Those are the shore of the Old World—the Welsh mountains.

And in front of us I can see nothing but flat land. Where is that?

That is the mouth of the Severn and Avon; where we shall be in half an hour more.

And there, on the right, over the low hills, I can see higher ones, blue and hazy.

Those are an island of the Old World, called now the Mendip Hills ; and we are steaming along the great strait between the Mendips and the Welsh mountains, which once was coral reef, and is now the Severn sea : and by the time you have eaten your breakfast we shall steam in through a crack in that coral reef ; and you will see what you missed seeing when you went to Ireland, because you went on board at night.

* * * * *

Oh ! Where have we got to now ? Where is the wide Severn sea ?

Two or three miles beyond us ; and here we are in narrow little Avon.

Narrow indeed. I wonder that the steamer does not run against those rocks. But how beautiful they are, and how the trees hang down over the water, and are all reflected in it !

Yes. The gorge of the Avon is always lovely. I saw it first when I was a little boy like you ; and I have seen it many a time since, in sunshine and in storm, and thought it more lovely every time. Look ! there is something curious.

What ! Those great rusty rings fixed into the rock ?

Yes. Those may be as old, for aught I know, as Queen Elizabeth's or James's reign.

But why were they put there ?

For ships to hold on by, if they lost the tide.

What do you mean ?

It is high tide now. That is why the water is almost up to the branches of the trees. But when the tide turns, it will all rush out in a torrent which would sweep ships out to sea again, if they had not steam, as we have, to help them up against the stream. So sailing ships, in old times, fastened themselves to those rings, and rode against the stream till the tide turned, and carried them up to Bristol.

But what is the tide ? And why does it go up and down ? And why does it alter with the moon, as I heard you all saying so often in Ireland ?

That is a long story, which I must tell you something about some other time. Now I want you to look at

something else : and that is, the rocks themselves, in which the rings are. They are very curious in my eyes, and very valuable ; for they taught me a lesson in geology when I was quite a boy : and I want them to teach it to you now.

What is there curious in them ?

This. You will soon see for yourself, even from the steamer's deck, that they are not the same rock as the high limestone hills above. They are made up of red sand and pebbles ; and they are a whole world younger, indeed some say two worlds younger, than the limestone hills above, and lie upon the top of the limestone. Now you may see what I meant when I said that the newer rocks, though they lie on the top of the older, were often lower down than they are.

But how do you know that they lie on the limestone ?

Look into that corner of the river, as we turn round, and you will see with your own eyes. There are the sandstones, lying flat on the turned-up edges of another rock.

Yes ; I see. The layers of it are almost upright.

Then that upright rock underneath is part of the great limestone hill above. So the hill must have been raised out of the sea, ages ago, and eaten back by the waves ; and then the sand and pebbles made a beach at its foot, and hardened into stone ; and there it is. And when you get through the limestone hills to Bristol, you will see more of these same red sandstone rocks, spread about at the foot of the limestone-hills, on the other side.

But why is the sandstone two worlds newer than the limestone ?

Because between that sandstone and that limestone comes hundreds of feet of rock, which carry in them all the coal in England. Don't you remember that I told you that once before ?

Oh yes. But I see no coal between them there.

No. But there is plenty of coal between them, over in Wales ; and plenty too between them on the other side of Bristol. What you are looking at there is just the lip of a great coal-box, where the bottom and the lid join. The bottom is the mountain limestone ; and the lid is the new red sandstone, or Trias, as they call it now : but the coal

you cannot see. It is stowed inside the box, miles away from here. But now, look at the cliffs and the downs, which (they tell me) are just like the downs in the Holy Land ; and the woods and villas, high over your head.

And what is that in the air ? A bridge ?

Yes—that is the famous Suspension Bridge—and a beautiful work of art it is. Ay, stare at it, and wonder at it, little man, of course.

But is it not wonderful ?

Yes : it was a clever trick to get those chains across the gulf, high up in air ; but not so clever a trick as to make a single stone of which those piers are built, or a single flower or leaf in those woods. The more you see of Madam How's masonry and carpentry, the clumsier man's work will look to you. But now we must get ready to give up our tickets, and go ashore, and settle ourselves in the train ; and then we shall have plenty to see as we run home ; more curious, to my mind, than any suspension bridge.

And you promised to show me all the different rocks and soils as we went home, because it was so dark when we came from Reading.

Very good.

* * * * *

Now we are settled in the train. And what do you want to know first ?

More about the new rocks being lower than the old ones, though they lie on the top of them.

I saw you in Ireland piling slates against a rock, and I thought to myself—"That is something like Madam How's work."

How ?

Why, see. The old rock stands for the mountains of the Old World, like the Welsh mountains, or the Mendip Hills. The slates stand for the new rocks, which have been piled up against these, one over the other. But, you see, each slate is lower than the one before it, and slopes more ; till the last slate which you are putting on is the lowest of all, though it overlies all.

I see now. I see now.

Then look at the sketch of the rocks between this and home. It is only a rough sketch, of course : but it will

make you understand something more about the matter. Now. You see the lump marked *a*, with twisted lines in it. That stands for the Mendip Hills to the west, which are made of old red sandstone, very much the same rock (to speak roughly) as the Kerry mountains.

And why are the lines in it twisted?

To show that the strata, the layers in it, are twisted, and set up at quite different angles from the limestone.

But how was that done?

By old earthquakes and changes which happened in old worlds, ages on ages since. Then the edges of the old red sandstone were eaten away by the sea—and some think by ice too, in some earlier age of ice; and then the limestone coral reef was laid down on them, “unconformably,” as geologists say—just as you saw the new red sandstone laid down on the edges of the limestone; and so one world is built up on the edge of another world, out of its scraps and ruins.

Then do you see *b*, with a notch in it? That means these limestones hills on the shoulder of the Mendips; and that notch is the gorge of the Avon which we have just steamed through.

And what is that black above it?

That is the coal, a few miles off, marked *c*.

And what is this *d*, which comes next?

That is what we are on now. New red sandstone, lying unconformably on the coal. I showed it you in the bed of the river, as we came along in the cab. We are here in a sort of amphitheatre, or half a one, with the limestone hills around us, and the new red sandstone plastered on, as it were, round the bottom of it inside.

But what is this high bit with *e* against it?

Those are the high hills round Bath, which we shall run through soon. They are newer than the soil here; and they are (for an exception) higher too; for they are so much harder than the soil here, that the sea has not eaten them away, as it has all the lowlands from Bristol right into the Somersetshire flats.

* * * * *

There. We are off at last, and going to run home to Reading, through one of the loveliest lines (as I think)

of old England. And between the intervals of eating fruit, we will geologize on the way home, with this little bit of paper to show us where we are.

What pretty rocks !

Yes. They are a boss of the coal measures, I believe, shoved up with the lias, the lias lying round them. But I warn you I may not be quite right : because I never looked at a geological map of this part of the line, and have learnt what I know, just as I want you to learn, simply by looking out of the carriage window.

Look. Here is lias rock in the side of the cutting ; layers of hard blue limestone, and then layers of blue mud between them, in which, if you could stop to look, you would find fossils in plenty ; and along that lias we shall run to Bath, and then all the rocks will change.

* * * * *

Now, here we are at Bath ; and here are the handsome fruit-women, waiting for you to buy.

And oh, what strawberries and cherries !

Yes. All this valley is very rich, and very sheltered too, and very warm ; for the soft south-western air sweeps up it from the Bristol Channel ; so the slopes are covered with fruit-orchards, as you will see as you get out of the station.

Why, we are above the tops of the houses.

Yes. We have been rising ever since we left Bristol ; and you will soon see why. Now we have laid in as much fruit as is safe for you, and away we go.

Oh, what high hills over the town ! And what beautiful stone houses ! Even the cottages are built of stone.

All that stone comes out of those high hills, into which we are going now. It is called Bathstone, freestone, or oolite ; and it lies on the top of the lias, which we have just left. Here it is marked *f*.

What steep hills, and cliffs too, and with quarries in them ! What can have made them so steep ? And what can have made this little narrow valley ?

Madam How's rain-spade from above, I suppose, and perhaps the sea gnawing at their feet below. Those free-stone hills once stretched high over our heads, and far away, I suppose, to the westward. Now they are all

gnawed out into cliffs,—indeed, gnawed clean through in the bottom of the valley, where the famous hot springs break out in which people bathe.

Is that why the place is called Bath?

Of course. But the old Romans called the place *Aquæ Solis*—the waters of the sun ; and curious old Roman remains are found here, which we have not time to stop and see.

Now look out at the pretty clear limestone stream running to meet us below, and the great limestone hills closing over us above. How do you think we shall get out from among them ?

Shall we go over their tops ?

No. That would be too steep a climb, for even such a great engine as this.

Then there is a crack which we can get through.

Look and see.

Why, we are coming to a regular wall of hill, and—

And going right through it in the dark. We are in the Box Tunnel.

* * * * *

There is the light again : and now, I suppose, you will find your tongue.

How long it seemed before we came out !

Yes, because you were waiting and watching, with nothing to look at : but the tunnel is only a mile and a quarter long, after all, I believe. If you had been looking at fields and hedgerows all the while, you would have thought no time at all had passed.

What curious sandy rocks on each side of the cutting, in lines and layers !

Those are the freestone still ; and full of fossils they are, too. But do you see that they dip away from us ? Remember that. All the rocks are sloping eastward, the way we are going ; and each new rock or soil we come to lies on the top of the one before it. Now we shall run down hill for many a mile, down the back of the oolites, past pretty Chippenham, and Wootton Bassett, towards Swindon spire. Look at the country, child ; and thank God for this fair English land, in which your lot is cast.

What beautiful green fields ; and such huge elm-trees ; and orchards ; and flowers in the cottage gardens !

Ay, and what crops, too : what wheat and beans, turnips and mangold ! All this land is very rich and easily worked : and hereabouts is some of the best farming in England. The Agricultural College at Cirencester, of which you have so often heard, lies there away, a few miles to our left ; and there lads go to learn to farm, as no men in the world, save English and Scotch, know how to farm.

But what rock are we on now ?

On rock that is much softer than that on the other side of the oolite hills : much softer, because it is much newer. We have got off the oolites on to what is called the Oxford clay ; and then, I believe, on to the Coral rag ; and on that again lies what we are coming to now. Do you see the red sand in that field ?

Yes.

Then that is the lowest layer of a fresh world, so to speak ; a world still younger than the oolites—the chalk world.

But that is not chalk, or anything like it.

No, that is what is called Greensand.

But it is not green, it is red.

I know : but years ago it got the name from one green vein in it, in which the "Coprolites," as you learnt to call them at Cambridge, are found ; and that, and a little layer of blue clay, called gault, between the upper Greensand, and lower Greensand, runs along everywhere at the foot of the chalk hills.

I see the hills now. Are they chalk ?

Yes, chalk they are ; so we may begin to feel near home now. See how they range away to the south toward Devizes, and Westbury, and Warminster, a goodly land and large. At their feet, everywhere, run the rich pastures on which the Wiltshire cheese is made ; and here and there, as at Westbury, there is good iron-ore in the green sand, which is being smelted now, as it used to be in the Weald of Surrey and Kent ages since. I must tell you about that some other time.

But are there Coprolites here ?

I believe there are : I know there are some at Swindon ; and I do not see why they should not be found, here and

there, all the way along the foot of the downs, and from here to Cambridge.

But do these downs go to Cambridge?

Of course they do. We are now in the great valley which runs right across England from southwest to northeast, from Axminster in Devonshire to Hunstanton in Norfolk, with the chalk always on your right hand, and the oolite hills on your left, till it ends by sinking into the sea, among the fens of Lincolnshire and Norfolk.

But what made that great valley?

I am not learned enough to tell. Only this I think we can say—that once on a time these chalk downs on our right reached high over our heads here, and far to the north; and that Madam How pared them away, whether by icebergs, or by sea-waves or merely by rain, I cannot tell.

Well, those downs do look very like sea-cliffs.

So they do, very like an old shore-line. Be that as it may, after the chalk was eaten away, Madam How began digging into the soils below the chalk, on which we are now; and because they were mostly soft clays, she cut them out very easily, till she came down, or nearly down, to the harder freestone rocks which run along on our left hand, miles away; and so she scooped out this great vale, which we call here the Vale of White Horse; and further on the Vale of Aylesbury; and then the Bedford Level; and then the dear ugly old Fens.

Is this the Vale of White Horse? Oh, I know about it; I have read “The Scouring of the White Horse.”

Of course you have; and when you are older you will read a jollier book still,—“Tom Brown’s School Days,”—and when we have passed Swindon, we shall see some of the very places described in it, close on our right.

* * * * *

There is the White Horse Hill.

The White Horse Hill! But where is the horse?

I can see a bit of him: but he does not look like a horse from here, or indeed from any other place; he is a very old horse indeed, and a thousand years of wind and rain have spoilt his anatomy a good deal, on the top of that wild down.

And is that really where Alfred fought the Danes ?

As certainly, boy, I believe, as that Waterloo is where the Duke fought Napoleon. Yes : you may well stare at it with all your eyes, the noble down. It is one of the most sacred spots on English soil.

Ah, it is gone now. The train runs so fast.

So it does ; too fast to let you look long at one thing : but in return, it lets you see so many more things in a given time than the slow old coaches and posters did. — Well ? what is it ?

I want to ask you a question, but you won't listen to me.

Won't I ? I suppose I was dreaming with my eyes open. You see, I have been so often along this line—and through this country, too, long before the line was made—that I cannot pass it without its seeming full of memories—perhaps of ghosts.

Of real ghosts ?

As real ghosts, I suspect, as any one on earth ever saw ; faces and scenes which have printed themselves so deeply on one's brain, that when one passes the same place, long years after, they start up again, out of fields and roadsides, as if they were alive once more, and need sound sense to send them back again into their place, as things which are past forever, for good and ill. But what did you want to know ?

Why, I am so tired of looking out of the window. It is all the same : fields and hedges, hedges and fields ; and I want to talk.

Fields and hedges, hedges and fields ? Peace and plenty, plenty and peace. However, it may seem dull, now that the grass is cut ; but you would not have said so two months ago, when the fields were all golden-green with buttercups, and the white thorn hedges like crested waves of snow. I should like to take a foreigner down the Vale of Berkshire in the end of May, and ask him what he thought of old England. But what shall we talk about ?

I want to know about Coprolites, if they dig them here, as they do at Cambridge.

I don't think they do. But I suspect they will some day.

But why do people dig them ?

Because they are rational men, and want manure for their fields.

But what are Coprolites ?

Well, they were called Coprolites at first, because some folk fancied they were the leavings of fossil animals, such as you may really find in the lias at Lynn in Dorsetshire. But they are not that ; and all we can say is, that a long time ago, before the chalk began to be made, there was a shallow sea in England, the shore of which was so covered with dead animals, that the bone-earth (the phosphate of lime) out of them crusted itself round every bone, and shell, and dead sea-beast on the shore, and got covered up with fresh sand, and buried for ages, as a mine of wealth.

But how many millions of dead creatures there must have been ! What killed them ?

We do not know. No more do we know how it comes to pass that this thin band (often only a few inches thick) of dead creatures should stretch all the way from Dorsetshire to Norfolk, and, I believe, up through Lincolnshire. And what is stranger still, this same bone-earth bed crops out on the south side of the chalk at Farnham, and stretches along the foot of those downs, right into Kent, making the richest hop-lands in England, through Surrey, and away to Tunbridge. So that it seems as if the bed lay under the chalk everywhere, if once we could get down to it.

But how does it make the hop-lands so rich ?

Because hops, like tobacco and vines, take more phosphorus out of the soil than any other plants which we grow in England ; and it is the washings of this bone-earth bed which make the lower lands in Farnham so unusually rich, that in some of them—the garden, for instance, under the Bishop's castle—have grown hops without resting, I believe, for three hundred years.

But who found out all this about the Coprolites ?

Ah—I will tell you ; and show you how scientific men, whom ignorant people sometimes laugh at as dreamers, and mere pickers-up of useless weeds and old stones, may do real service to their country and their countrymen, as I hope you will some day.

There was a clergyman named Henslow, now with

God, honored by all scientific men, a kind friend and teacher of mine, loved by every little child in his parish. His calling was botany : but he knew something of geology. And some of these Coprolites were brought him as curiosities, because they had fossils in them. But he (so the tale goes) had the wit to see that they were not, like other fossils, carbonate of lime, but phosphate of lime—bone-earth. Whereon he told the neighboring farmers that they had a mine of wealth opened to them, if they would but use them for manure. And after a while he was listened to. Then others began to find them in the Eastern counties ; and then another man, as learned and wise as he was good and noble,—John Paine of Farnham, also now with God,—found them on his own estate, and made much use and much money of them : and now tens of thousands of pounds' worth of valuable manure are made out of them, every year, in Cambridge-shire and Bedfordshire, by digging them out of land which was till lately only used for common farmers' crops.

But how do they turn Coprolites into manure ? I used to see them in the railway trucks at Cambridge, and they were all like what I have at home—hard pebbles.

They grind them first in a mill. Then they mix them with sulphuric acid and water, and that melts them down, and parts them into two things. One is sulphate of lime (gypsum, as it is commonly called), and which will not dissolve in water, and is of little use. But the other is what is called superphosphate of lime, which will dissolve in water ; so that the roots of the plants can suck it up : and that is one of the richest of manures.

Oh, I know : you put superphosphate on the grass last year.

Yes. But not that kind ; a better one still. The superphosphate from the Coprolites is good ; but the superphosphate from fresh bones is better still, and therefore dearer, because it has in it the fibrine of the bones, which is full of nitrogen, like gristle or meat ; and all that has been washed out of the bone earth bed ages and ages ago. But you must learn some chemistry to understand that.

I should like to be a scientific man, if one can find out such really useful things by science.

Child, there is no saying what you might find out, or of what use you may be to your fellow-men. A man working at science, however dull and dirty his work may seem at times, is like one of those "chiffoniers," as they call them in Paris—people who spend their lives in gathering rags and sifting refuse, but who may put their hands at any moment upon some precious jewel. And not only may you be able to help your neighbors to find out what will give them health and wealth: but you may, if you can only get them to listen to you, save them from many a foolish experiment, which ends in losing money, just for want of science. I have heard of a man who, for want of science, was going to throw away great sums (I believe he, luckily for him, never could raise the money) in boring for coal in our Bagshot sand sat home. The man thought that because there was coal under the heather moors in the North, there must needs be coal here likewise, when a geologist could have told him the contrary. There was another man at Hennequin's Lodge, near the Wellington College, who thought he would make the poor sands fertile by manuring them with whale oil, of all things in the world. So he not only lost all the cost of his whale oil, but made the land utterly barren, as it is unto this day; and all for want of science.

And I knew a manufacturer, too, who went to bore an Artesian well for water, and hired a regular well-borer to do it. But, meanwhile, he was wise enough to ask a geologist of those parts how far he thought it was down to the water. The geologist made his calculations, and said:

"You will go through so many feet of Bagshot sand; and so many feet of London clay; and so many feet of the Thanet beds between them and the chalk: and then you will win water, at about 412 feet; but not, I think, till then."

The well-sinker laughed at that, and said, "He had no opinion of geologists, and suchlike. He never found any clay in England but what he could get through in 150 feet."

So he began to bore—150 feet, 200, 300: and then he began to look rather silly; at last, at 405 feet—only seven feet short of what the geologist had foretold—up came

the water in a regular spout. But, lo and behold, not expecting to have to bore so deep, he had made his bore much too small; and the sand out of the Thanet beds "blew up" into the bore, and closed it. The poor manufacturer spent hundreds of pounds more in trying to get the sand out, but in vain; and he had at last to make a fresh and much larger well by the side of the old one, bewailing the day when he listened to the well-sinker and not to the geologist, and so threw away more than a thousand pounds. And there is an answer to what you asked me on board the yacht—What use was there in learning little matters of natural history and science, which seemed of no use at all? And now look out again. Do you see any change in the country?

What?

Why, there to the left.

There are high hills there now, as well as to the right. What are they?

Chalk hills too. The chalk is on both sides of us now. Those are the Chilterns, all away to Ipsden and Nettlebed, and so on across Oxfordshire, and Buckinghamshire, and into Hertfordshire; and on again to Royston and Cambridge, while below them lies the Vale of Aylesbury; you can just see the beginning of it on their left. A pleasant land are those hills, and wealthy; full of noble houses buried in the deep beech-woods, which once were a great forest, stretching in a ring round the north of London, full of deer and boar, and of wild bulls too, even as late as the twelfth century, according to the old legend of Thomas à Becket's father and the fair Saracen, which you have often heard.

I know. But how are we going to get through the chalk hills? Is there a tunnel, as there is at Box and at Micheldever?

No. Something much prettier than a tunnel, and something which took a great many years long in making. We shall soon meet with a very remarkable and famous old gentleman, who is a great adept at digging, and at landscape-gardening likewise; and he has dug out a path for himself through the chalk, which we shall take the liberty of using also. And his name, if you wish to know it, is Father Thames.

I see him. What a great river !

Yes. Here he comes, gleaming and winding down from Oxford, over the lowlands, past Wallingford ; but where he is going to it is not so easy to see.

Ah, here is chalk in the cutting at last. And what a high bridge ! And the river far under our feet. Why, we are crossing him again !

Yes ; he winds more sharply than a railroad can. But is not this prettier than a tunnel ?

Oh, what hanging woods, and churches ; and such great houses, and pretty cottages and gardens—all in this narrow crack of a valley !

Ay. Old Father Thames is a good landscape gardener, as I said. There is Basildon—and Hurley—and Pangbourne, with its roaring lasher. Father Thames has had to work hard, for many an age, before he could cut this trench right through the chalk, and drain the water out of the flat vale behind us. But I suspect the sea helped him somewhat, or perhaps a great deal, just where we are now.

The sea ?

Yes. The sea was once—and that not so very long ago—right up here, beyond Reading. This is the uppermost end of the great Thames valley, which must have been an estuary—a tide flat, like the mouth of the Severn, with the sea eating along at the foot of all the hills. And if the land sunk only some fifty feet,—which is a very little indeed, child, in this huge ever-changing world,—then the tide would come up to Reading again, and the greater part of London and the county of Middlesex drowned in salt water.

How dreadful that would be !

Dreadful indeed. God grant that it may never happen. More terrible changes of land and water have happened, and are happening still in the world : but none, I think, could happen which would destroy so much civilization and be such a loss to mankind, as that the Thames valley should become again what it was, geologically speaking, only the other day, when these gravel banks, over which we are running to Reading, were being washed out of the chalk cliffs up above at every tide, and rolled on a beach, as you have seen them rolling still at Ramsgate.

Now here we are at Reading. There is the carriage

waiting, and away we are off home ; and when we get home, and have seen everybody and everything, we will look over our section once more.

But remember, that when you ran through the chalk hills to Reading, you passed from the bottom of the chalk to the top of it, on to the Thames gravels, which lie there on the chalk, and on to the London clay, which lies on the chalk also, with the Thames gravels always over it. So that, you see, the newest layers, the London clay and the gravels, are lower in height than the limestone cliffs at Bristol, and much lower than the old mountain ranges of Devonshire and Wales, though, in geological order, they are far higher ; and there are whole worlds of strata, rocks and clays, one on the other, between the Thames gravels and the Devonshire hills.

But how about our moors ? They are newer still, you said, than the London clay, because they lie upon it : and yet they are much higher than we are here at Reading.

Very well said ; so they are, two or three hundred feet higher. But our part of them was left behind, standing up in banks, while the valley of the Thames was being cut out by the sea. Once they spread all over where we stand now, and away behind us beyond Newbury in Berkshire, and away in front of us, all over where London now stands.

How can you tell that ?

Because there are little caps—little patches—of them left on the tops of many hills to the north of London ; just remnants which the sea, and the Thames, and the rain have not eaten down. Probably they once stretched right out to sea, sloping slowly under the waves, where the mouth of the Thames is now. You know the sand-cliffs at Bournemouth ?

Of course.

Then those are of the same age as the Bagshot sands, and lie on the London clay, and slope down off the New Forest into the sea, which eats them up, as you know, year by year and day by day. And there were once, perhaps, cliffs just like them where London Bridge now stands.

*

*

*

*

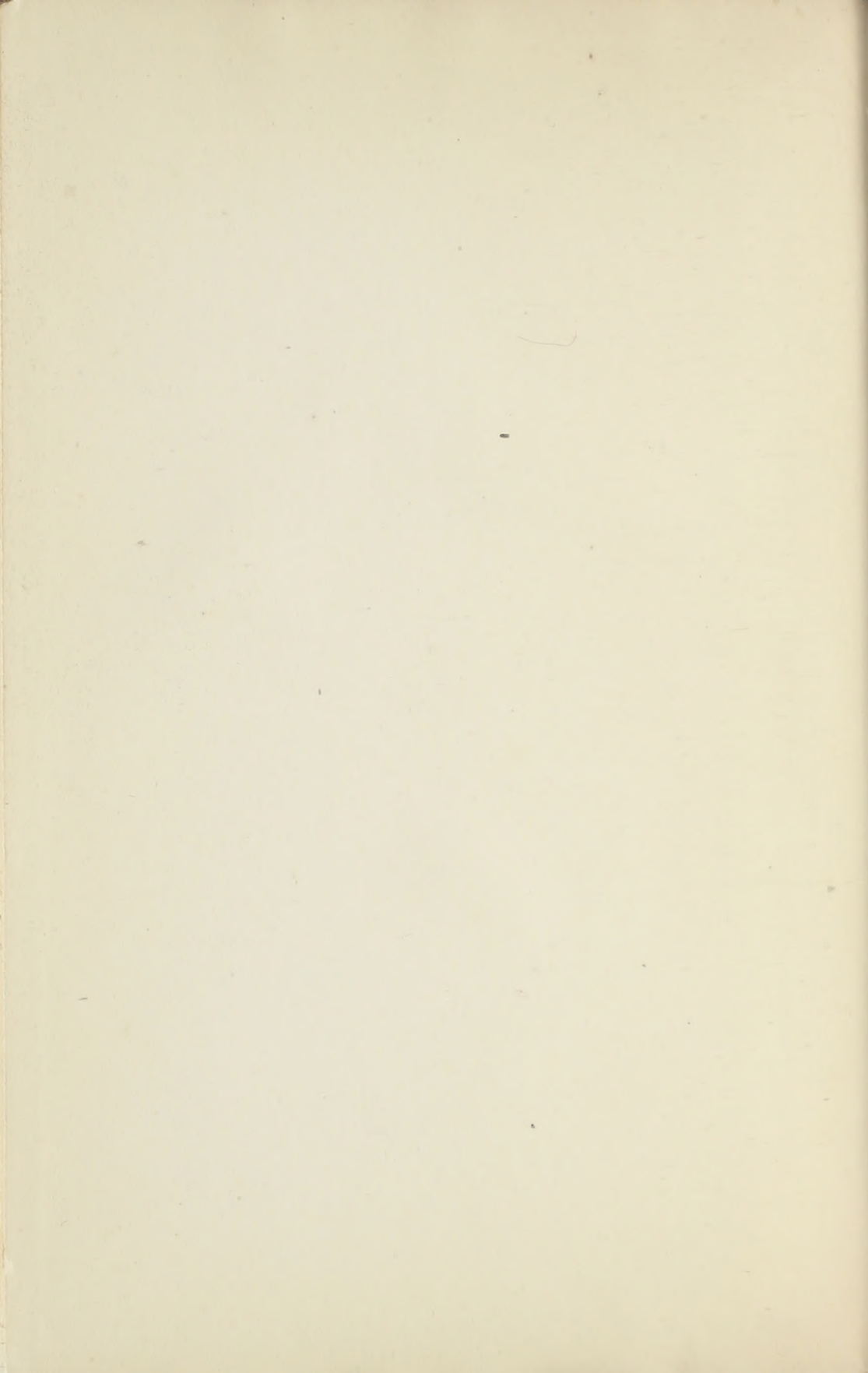
*

There, we are rumbling away home at last, over the dear old heather-moors. How far we have travelled—in our fancy at least—since we began to talk about all these things, upon the foggy November day, and first saw Madame How digging at the sand-banks with her water-spade? How many countries we have talked of; and what wonderful questions we have got answered, which all grew out of the first question, How were the heather-moors made! And yet we have not talked about a hundredth part of the things about which these very heather-moors ought to set us thinking. But so it is, child. Those who wish honestly to learn the laws of Madame How, which we call Nature, by looking honestly at what she does, which we call Fact, have only to begin by looking at the very smallest thing, pin's head or pebble, at their feet, and it may lead them—whither, they cannot tell. To answer any one question, you find you must answer another; and to answer that you must answer a third, and then a fourth; and so on forever and ever.

Forever and ever?

Of course. If we thought and searched over this universe—ay, I believe, only over this one little planet called earth—for millions on millions of years, we should not get to the end of our searching. The more we learnt, the more we should find there was left to learn. All things, we should find, are constituted according to a Divine and wonderful Order, which links each thing to every other thing; so that we cannot fully comprehend any one thing without comprehending all things: and who can do that, save He who made all things? Therefore our true wisdom is never to fancy that we do comprehend: never to make systems and theories of the universe (as they are called) as if we had stood by and looked on when time and space began to be: but to remember that those who say they understand, show, simply by so saying, that they understand nothing at all; that those who say they see, are sure to be blind; while those who confess that they are blind, are sure some day to see. All we can do is, to keep up the childlike heart, humble and teachable, though we grew as wise as Newton or as Humboldt; and to follow, as good Socrates bids us, Reason whithersoever it leads us, sure that it will never

lead us wrong, unless we have darkened it by hasty and conceited fancies of our own, and so have become like those foolish men of old, of whom it was said that the very light within them was darkness. But if we love and reverence and trust Fact and Nature, which are the will, not merely of Madam How, or even of Lady Why, but of Almighty God Himself, then we shall be really loving, and reverencing, and trusting God ; and we shall have our reward by discovering continually fresh wonders and fresh benefits to man ; and find it as true of science, as it is of this life and of the life to come—that eye hath not seen, nor ear heard, nor hath it entered into the heart of man to conceive, what God has prepared for those who love Him.



TUFTS UNIVERSITY LIBRARIES



3 9090 01812 6637

KINGSLEY